

EXHIBIT 1

Loan Agreement

This Loan Agreement is entered into this 17 day of August 2010 by and among Frank Bisignano located at 5 Jared Court, Watchung, New Jersey 07069 (hereinafter "Lender"), Inselberg Interactive LLC, a Limited Liability Company of the State of New Jersey with an office located at 26 Catamaran Court, Mount Arlington, New Jersey 07856 (hereinafter referred to as "Borrower"), Eric Inselberg located at 26 Avenue at Port Imperial, Apt 211, West New York, New Jersey 07093 and, Martha Ard presently residing at 41 Vail Lane, Watchung, New Jersey. 07960 (hereinafter collectively referred to as "Guarantors")

WHEREAS Borrower is the owner of certain patents listed on schedule "A" attached hereto; and;

WHEREAS Lender agrees to lend Borrower the sum of \$500,000.00 to be secured by a Security Agreement , Financing Statements, Assignments, and PTO forms 1595 on the Patents listed on schedule "A" , a Note signed by Borrower , Guarantee of Eric Inselberg and Martha Ard, as well as any other collateral documents required by Lender and upon certain additional terms and conditions as set forth in this Agreement and;

NOW, THEREFORE, IT IS AGREED BY AND AMONG THE PARTIES AS FOLLOWS:

1. Borrower is the owner of the Patents listed on schedule "A" attached hereto.
2. Borrower will use the proceeds of the Loan of \$500,000.00 solely for the repayment of the Loan made to Borrower by Sean Parkinson for a loan to Borrower dated June 30,2009. If Lender so desires Lender may make the payment to Sean Parkinson directly. When Borrower pays off the loan to Sean Parkinson, Borrower shall present satisfactory proof to Lender that said loan has been repaid in full within ten (10) days from the date of this Loan Agreement..

3. Borrower shall execute a Promissory note in favor of the Lender hereafter (the "Note") in the amount of \$500,000.00 to be paid in full one year from the date hereof. The interest on the note shall accrue and be payable according to the terms of the Note. All of the terms of the Note are incorporated in this Loan Agreement as if fully set forth herein.

4. Any and all revenues received by the Borrower from the sale of patents or generated from any other source whatsoever shall be used solely to pre pay either in part or in full this Loan to Lender.

5. Borrower agrees and represents as follows:

(a) Borrower shall not sell, assign, transfer, or otherwise encumber any of its assets while any part of the Loan is outstanding,

(b) Borrower shall provide access to Lender of all of the Borrower's books and records upon reasonable notice to Borrower and during normal business hours,

(c) Borrower is a validly organized Limited Liability Company of the State of New Jersey, the LLC is in good standing, Eric Inselberg is the owner of 82.5% of Borrower, Martha Ard is the owner of 12.5% of the Borrower, Robert S. Parkinson is the owner of 5% of Borrower. Borrower represents that the interest of Robert S. Parkinson will be transferred to Eric Inselberg upon the payment to Robert S. Parkinson of all outstanding debts owed to him by the Borrower and the Guarantors from the proceeds of this Loan.. Eric Inselberg is the Managing Member of the LLC, there are no liens, judgments or other encumbrances against the LLC and there are no judgments against Eric Inselberg or Martha Ard .

(d) The LLC has full power and authority to consummate the transaction contemplated hereby and to execute, deliver and perform the Loan Agreement and any Loan Document to which it is a party,

(e) Borrower and Guarantors are in compliance with, and the transactions contemplated hereby and the other Loan Documents do not and will not violate any provision of, or require any filing other than the filings contemplated hereunder, or registration, consent or approval under any Law presently in effect having applicability to Borrower or Guarantors; Borrower has filed all tax returns (federal, state, and local) required to be filed and has paid all taxes assessments and governmental charges and levies due and payable, including interest and penalties, if applicable.

(f) Borrower and Guarantors are, and upon consummation of the transactions contemplated by this Loan Agreement, the other Loan Documents and any related documents, will be solvent.

(g) While any part of the Loan, either principal or interest, is outstanding, Borrower shall not issue any additional membership interest in Borrower to any person, firm, corporation, or any other entity.

(h) While any part of the Loan, either principal or interest, is outstanding, Guarantors shall not transfer any of their membership interests in Borrower to any other person, firm, corporation, or other entity, and shall maintain their individual percentage interest in Borrower.

(i) While any part of the Loan, either principal or interest, is outstanding, Borrower shall not sell, assign, transfer, trade or otherwise dispose of, in any manner whatsoever, any of the Patents secured by this Loan Agreement without the written consent of Lender.

(j) While any part of the Loan, either principal or interest, is outstanding, Borrower and Eric Inselberg agree that any additional patents received, transferred to or otherwise acquired shall be acquired in the name of Borrower only.

(k) Borrower represents and warrants that all of the representations made to Lender herein and in other Loan Documents to be continuously true and correct.

(l) The Canadian and Australian Patents that are in the name of Eric Inselberg individually shall be transferred to Frank Bisignano subject to Frank Bisignano transferring said Patents back to Eric Inselberg upon payment of all loan proceeds in full. If Borrower is in default of any of the Loan Documents which default has not been cured according to the terms of any of the Loan Documents then and in that event Frank Bisignano shall have the right to dispose of the Canadian and Australian Patents and apply any proceeds received to repay his expenses and costs incurred and any outstanding principal and interest due and any balance remaining shall be paid over to Eric Inselberg.

(m) As additional security for the Loan Eric Inselberg agrees to deliver to Frank Bisignano two boxes containing sports memorabilia owned by him which he values at \$232,000.00 (See list attached hereto). Said memorabilia to be held by Frank Bisignano until all accrued interest and principal has been paid in full at which time Frank Bisignano agree to return the memorabilia to Eric Inselberg. If the Borrower or Guarantors are in default under the terms of the various loan documents which default has not been cured than and in that event Frank Bisignano shall have the right to dispose of the memorabilia and apply any funds received from the disposition of the memorabilia in accordance with the terms and conditions of the various loan documents.

(n) Eric Inselberg also agrees to provide Frank Bisignano with a Security Interest(Agreement) in additional sports memorabilia owned by Eric Inselberg and presently located in a public storage facility at 300 Rt. 10, East Hanover , New Jersey 07936 (see list attached hereto). Any financing statements accompanying the Security Agreement shall not be filed or recorded unless the Borrower and Guarantors are in default under the terms of the various loan documents which default has not been cured at which time Frank Bisignano shall have the right to file said

financing statements and proceed to protect his interest in the memorabilia and dispose of same in accordance with law.

6 Default:

(a). If Borrower fails to make any payment required by the Note within ten (10) days after its due date, or if Borrower fails to keep any other promise made in the Note, or the Security Agreement, Loan Agreement, or any other document signed by Borrower as part of this transaction, Lender's remedies shall either be in a court of law or in equity, or both as Lender may determine. Lender's remedies shall also include the right to declare all principal, interest and other sums outstanding under the Note to be immediately due and payable in full, To execute upon all security interests and assignments, Lender's delay or failure to accelerate the Note, or to exercise any other available right or remedy shall not impair any such right or remedy nor shall it be construed to be a forbearance or waiver.

b. In the event of default, Lender shall be entitled, in addition to all other remedies, to collect interest on the total unpaid principal and interest arrearages at the highest interest rate allowed by law.

c. In the event of default, in addition to the principal, interest and other amounts due

on the Note, Security Agreement and Loan Agreement and any other Documents signed by Borrower in connection with this loan, Borrower shall pay Lender all of Lender's costs, including reasonable attorney's fees, incurred by Lender in protecting or enforcing his

rights under the Note, Security Agreement, Loan Agreement or any other Documents signed by the Borrower in connection with this loan, or with respect to any other collateral for the Note, including costs of collection and litigation.

7. Any and all notices from one party to the other shall be in writing and shall be delivered personally, sent by certified mail return receipt requested, or by facsimile transmission provided proof that said transmission was sent and received is provided by the party sending said transmission to the other party. All notices shall be sent to the Lender or the Borrower at the addresses set forth in the beginning of this document with a copy sent to Erwin C. Schnitzer Esq. 31 C. Mountain Boulevard, Warren, New Jersey 07059, Fax (908) 753-1954.

8. Borrower agrees to pay Lender's attorney fees and all expenses and recording fees incurred by Lender in connection with the Loan contemplated herein.

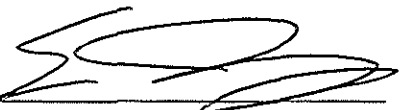
9. This Loan Agreement shall be binding on the parties hereto, their respective heirs, executors, administrators, successors and assigns.

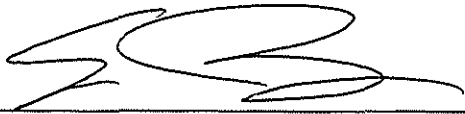
10. This Loan Agreement shall be governed by the laws of the State of New Jersey.

11. This Loan Agreement may be executed in two or more counterparts, each of which shall be deemed an original document.

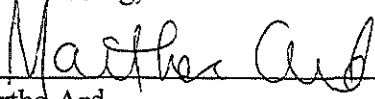
In Witness whereof the parties have signed this Agreement as of the date appearing at the top of the first page of this Loan Agreement.

INSELBERG INTERACTIVE, LLC

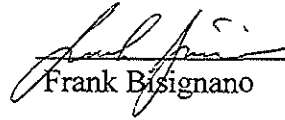

By: Managing Member
Eric Inselberg



Eric Inselberg,



Martha Ard



Frank Bisignano

PATENT PORTFOLIO OF ERIC INSELBERG

Entitled: METHODS, SYSTEMS AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE EN

<u>Docket Number</u>	<u>Country</u>	<u>Relation Type</u>	<u>Filing Type</u>	<u>Status</u>	<u>Application Number</u>	<u>Application Date</u>	<u>Patent Number</u>
<u>U.S. Granted Patents</u>							
0128-1	United States	Original Filing	National	Granted	09/656,096	09/06/2000	6,434,398
0128-1 CON	United States	Continuation	National	Granted	09/854,267	05/11/2001	6,650,903
0128-1 CON2	United States	Continuation	National	Granted	10/661,871	09/12/2003	6,975,878
0128-1 CON3	United States	Continuation	National	Granted	11/266,783	11/04/2005	7,123,930
0128-1 CON4	United States	Continuation	National	Granted	11/542,819	10/04/2006	7,522,930
0128-1 CON 6	United States	Continuation	National	Granted	11/894,189	08/20/2007	7,424,304
0128-1 CON CIP	United States	Continuation-In-Part	National	Granted	10/378,582	03/05/2003	6,760,595
0128-1 CON CIP2	United States	Continuation-In-Part	National	Granted	10/792,170	03/03/2004	6,996,413
0128-1 CON CIP3	United States	Continuation-In-Part	National	Granted	11/300,208	12/14/2005	7,248,888
0128-1 CON CIP4	United States	Continuation-In-Part	National	Granted	11/347,993	02/06/2006	7,263,378
0128-1C-CIP3CIP	United States	Continuation-In-Part	National	Granted	11/725,759	03/20/2007	7,587,214
0128-1 CON CIP4 CIP	United States	Continuation-In-Part	National	Issued	11/799,139	05/01/2007	
0128-1 CON CIP5	United States	Continuation-In-Part	National	Issued	12/465,524	06/18/2009	
0128-1 CON8	United States	Continuation	National	Filed	12/381,701	03/16/2009	7,693,532
<u>U.S. Patent Applications</u>							
0128-1 CON 5	United States	Continuation	National	Filed	11/894,163	08/20/2007	
0128-1 CON 7	United States	Continuation	National	Filed	12/228,908	08/18/2008	
0128-1 CON C4C	United States	Continuation-In-Part	National	Filed	11/799,139	05/01/2007	
0128-1 CON CIP5	United States	Continuation-In-Part	National	Filed	12/465,524	06/18/2009	
Application Not Yet Filed							

ENTERTAINMENT[illegible]

EXHIBIT 2

NOTE

\$ 500,000.00

August 17, 2010

FOR VALUE RECEIVED, **Inselberg Interactive, LLC**, located at 26 Catamaran Court, Mount Arlington, New Jersey 07856 (the "Borrower") promises to pay to the order of **Frank Bisignano** located at 5 Jared Court, Watchung, New Jersey 07069, (the "Lender"), the principal sum of Five Hundred Thousand dollars **(\$500,000.00) Dollars**, together with interest at the rate of 5 % per annum, from the date hereof, and for the next six months and then at the rate of 10% per annum on the seventh month from the date hereof and monthly thereafter until the Borrower's obligations with respect to the payment of the principal sum together with the interest which will accrue and be payable along with the principal sum of \$500,000.00 one year from the date hereof.

1. Interest Rate

a. Borrower will be charged interest on the unpaid principal from the date of this Note and for the first six months thereafter at the rate of 5% per cent per annum and on the seventh month thereafter and until the full amount of principal has been paid at the rate of 10% per annum. The term of this Note is one year from the date hereof at which time the accrued interest and principal shall be due and payable.

2. Payments.

a. The Interest for the first six months from the date hereof in the monthly amount of \$2083.33 shall accrue as well as the monthly interest beginning on March 17, 2011 in the monthly amount of \$4166.67 until August 17, 2011 when the unpaid accrued interest and principal shall be due and payable in full. All payments will be made to the Lender at the address shown above or at a different place if required by the Lender. If the Lender has not received any payment within ten (10) days after the due date, Borrower will pay the Lender a late charge of 5% of the payment.

b. The principal and accrued interest due and owing in accordance with the terms of this Note may be prepaid, in whole or in part, at any time before its final due date without penalty to the Borrower.

c. Payments received under this Note shall be applied to any accrued interest. Notwithstanding the previous sentence, Frank Bisignano shall have the option to apply any payment received under this Note first to any collection fees or other expenses to which Frank Bisignano may be entitled under this Note or any other documents that the Borrower has signed in connection with the loan from Lender to Borrower.

3. Collateral

a. Borrower has executed and delivered a Security Interest, UCC Financing

Statements, PTO forms 1595, and Assignments of even date herewith encumbering Patents owned by Borrower, as security for performance of all of Borrower's promises and obligations as set forth in this Note. The Security Agreement, UCC Financing Statements, PTO form 1595, and Assignments shall be a first lien on said property. All promises and obligations as set forth in the Security Agreement, Loan Agreement and any other documents signed by Borrower are incorporated in this Note by reference as though set forth in full herein.

4. Default.

a. If Borrower fails to make any payment required by this Note within ten (10) days after its due date, or if Borrower fails to keep any other promise made in this Note, or the Security Agreement, Loan Agreement, or any other document signed by Borrower as part of this transaction, Lender's remedies shall either be in a court of law or in equity, or both as Lender may determine. Lender's remedies shall also include the right to declare all principal, interest and other sums outstanding under this Note to be immediately due and payable in full. To execute upon all security interests and assignments, Lender's delay or failure to accelerate this Note, or to exercise any other available right or remedy shall not impair any such right or remedy nor shall it be construed to be a forbearance or waiver.

b. In the event of default, Lender shall be entitled, in addition to all other remedies, to collect interest on the total unpaid principal and interest arrearages at the highest interest rate allowed by law.

c. In the event of default, in addition to the principal, interest and other amounts due on the Note, Security Agreement and Loan Agreement and any other Documents signed by Borrower in connection with this loan, Borrower shall pay Lender all of Lender's costs, including reasonable attorney's fees, incurred by Lender in protecting or enforcing his rights under this Note, Security Agreement, Loan Agreement or any other Documents signed by the Borrower in connection with this loan, or with respect to any other collateral for this Note, including costs of collection and litigation.

d. The Borrower and all other parties who at any time may be liable hereon in any capacity, jointly and severally, waive presentment, demand for payment, protest, notice of protest and notice of dishonor of this Note and authorize Lender, without notice, to grant extensions in the time of payment of any money owing under this Note.

5. Miscellaneous.

a. The Borrower expressly agrees that this Note and all the terms hereof shall be

governed by and construed in accordance with the laws of the State of New Jersey.

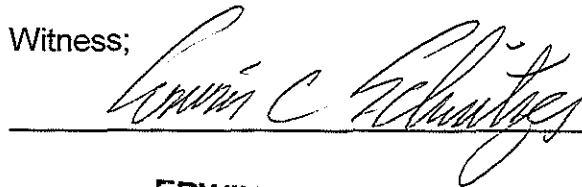
b. This Note shall be binding upon the Borrower, its successors and assigns and shall inure to the benefit of Lender and his heirs at law, successors, and assigns.

IN WITNESS WHEREOF, the Borrower has caused this Note to be duly executed and delivered on the day and year first above written.

Inselberg Interactive, LLC


By Eric Inselberg- Managing Member

Witness;



ERWIN C. SCHNITZER
ATTORNEY AT LAW
OF THE STATE OF N.J.

EXHIBIT 3

GUARANTY

The undersigneds, (the "Guarantors") hereby guarantee the obligation of Inselberg Interactive LLC., a limited liability company of the State of New Jersey, (the "Borrower") to Frank Bisignano (the "Lender") pursuant to a Note dated even date herewith by and between the Lender and the Borrower (the "Note"). Guarantors agree that all terms of the Note, Loan Agreement, Security Agreement and any other document or documents signed by Borrower of even date therewith on various Patents, a list of which is attached hereto, having been incorporated in and by reference having been made a part of the (Note) are all incorporated in this Guaranty as if fully set forth at length herein.

The Guarantors unconditionally and irrevocably guarantee the full, faithful, and punctual payment and performance when due, whether at the stated times, or upon demand of all the obligations of the Borrower, whether for principal, interest, fees, expenses, late charges or otherwise, together with any and all fees or expenses which the holder may incur in collecting any or all of the Borrower's obligations and/or in enforcing any rights thereunder.

The Guarantors guarantee that the Borrower's obligations will be paid and performed strictly in accordance with their terms, regardless of any law, regulation or decree which might in any manner affect any of the terms of the Note, or which might cause or permit to be invoked any alteration in the time, manner or amount of payment or performance by the Borrower. This Guaranty shall remain in full force and effect until all of the Borrower's obligations have been fully satisfied and until all sums received by the Lender are not subject to rescission or repayment upon the bankruptcy, insolvency or reorganization of the Borrower. The liability of the Guarantors hereunder shall in no way be affected or impaired by the bankruptcy of the Borrower.

The Guarantors hereby waive notice of acceptance of this Guaranty, presentment, demand for payment protest and any other notice whatsoever and promptness of the Lender in making any claim or demand hereunder; no act or omission of any kind shall in any way affect or impair this Guaranty. The Guarantors waive any contingent or absolute right the Guarantors may have (by way of subrogation, contribution or otherwise) to payment from the Borrower as a result of the Guarantors being required to make any payment of or perform any obligation pursuant to the terms of this Guaranty.

The Lender may extend, or modify the obligations of the Borrower, accept collateral or security, sell or release such collateral or security, release or discharge any comaker, endorser, Guarantor or other party, make changes of any sort in the Lender's manner of doing business or course of dealing with the Borrower or any Guarantor without affecting or impairing the liability of the Guarantors to the Lender under this Guaranty. No act, delay, omission, course of dealing or pattern of conduct among the

Lender, the Borrower, The Guarantors, or any third party, or any of them, will be a waiver of any of the Lender's rights or remedies under this Guaranty.

This Guaranty shall be construed as an irrevocable, continuing, absolute and unconditional guaranty of payment and performance, without regard to the validity, regularity, or enforceability of any of the aforesaid obligations. The Lender, at his option, may proceed in the first instance against the Guarantors and have his remedy under this Guaranty without being obliged to resort first to any security or any other remedy or remedies to enforce payment, collection or performance of any of the obligations hereby guaranteed, it being understood that liability of the Guarantors is the primary obligation hereunder; and the Lender may pursue all or any of his remedies at one or at different times.

The Guarantors are executing and delivering this Guaranty to induce the Lender to enter into the loan with Borrower. The Guarantors will derive benefits from the loan and acknowledge that the Lender would not enter into the loan if the Guarantors did not execute and delivery this Guaranty.

This Guaranty shall remain effective or be reinstated, as the case may be, if any payment of the Note is rescinded or must otherwise be returned upon the insolvency, bankruptcy or reorganization of any person, or otherwise, as if such payment had not been made.

Guarantors acknowledge that the obligations as set forth herein shall be joint and/or, several, with respect to the individuals constituting the said Guarantors.

Guarantors acknowledge receipt of a true copy of the Note .

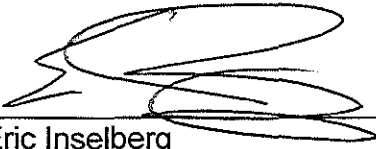
This Guaranty shall be governed by the laws of the State of New Jersey.

IN WITNESS WHEREOF, the Guarantors have signed, sealed and delivered this Guaranty as their voluntary act and deed on this 20 day of August , 2010.

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Witness::

Conrad C. Elmer 8/17/2010


Eric Inselberg

WITNESS:

Conrad C. Elmer 8/30/10

Martha Ard
Martha Ard

EXHIBIT 4

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SCHNITZER LAW OFFICE

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Security Agreement on Patents

Agreement made this 17 day of August, 2010 between Inselberg Interactive, a Limited Liability Company of the State of New Jersey located at 26 Catamaran Court, Mount Arlington, New Jersey 07856 ("Debtor"), and Frank Bisignano (the "Secured Party") having an address of 5 Jared Court, Watchung, New Jersey 07069.

Whereas, Debtor is the owner and holder of the patents listed on Schedule A hereto; and

Whereas, as a condition to the Secured Party making any loans or advances to Debtor pursuant to the Loan Agreement, dated as of the date hereof (the "Loan Agreement") between Debtor and the Secured Party, the Secured Party has required the execution and delivery hereof by Debtor;

Now, therefore, it is agreed that, for and in consideration of the loans and advances to be made by Secured Party under the Loan Agreement, and other good and valuable consideration, the receipt of which is hereby acknowledged, and as collateral security for the full and prompt payment and performance of all Obligations, as hereinafter defined, Debtor does hereby pledge with the Secured Party, and grant to the Secured Party a security interest in, and to all of its right, title and interest in and to (i) each of the Patents, as hereinafter defined, on Schedule A hereto; and (ii) any and all proceeds of the foregoing, including, without limitation, any claims by Debtor against third parties for infringement of the Patents (the "Collateral").

1. Terms defined in the Loan Agreement and not otherwise defined herein, shall have the meaning set forth in the Loan Agreement. As used in this Agreement, unless the context otherwise requires:

"Patents" shall mean (i) all letters patent of the United States or any other country, all right, title and interest therein and thereto, and all registrations and recordings thereof, including, without limitation, applications, registrations and recordings in the United States Patent and

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Trademark Office or in any similar office or agency of the United States, any State thereof or any other country or any political subdivision thereof, all whether now owned or hereafter acquired by Debtor, including, but not limited to, those described in Schedule A annexed hereto and made a part hereof, and (ii) all reissues, continuations, continuations-in-part or extensions thereof and all licenses thereof.

"Obligations" shall mean all indebtedness, obligations, liabilities and agreements of any kind of Debtor to Secured Party, now existing or hereafter arising, direct or indirect, arising by operation of law or otherwise, and all loan agreements, documents and instruments evidencing any of the foregoing obligations or under which any of the foregoing obligations may have been issued, created, assumed or guaranteed, and all extensions, renewals, refundings, replacements and modifications of the foregoing.

2. Debtor hereby represents, warrants, covenants and agrees as follows:

(a) Debtor will perform all acts and execute all documents, including, without limitation, assignments for security in form suitable for filing with the United States Patent and Trademark Office, requested by the Secured Party at any time to evidence, perfect, maintain, record and enforce the Secured Party's interest in the Collateral or otherwise in furtherance of the provisions of this Agreement, and Debtor hereby authorizes the Secured Party to execute and file one or more financing statements, Forms PTO 1595, and Assignments (and similar documents) or copies thereof or of this Security Agreement with respect to the Collateral signed only by the Secured Party.

(b) Debtor has the sole, full and clear title to each of the Patents shown on Schedule A hereto and the registrations thereof are valid and subsisting and in full force and effect. None of the Patents has been abandoned or dedicated, and, except to the extent that the Secured Party, upon prior written notice by Debtor, shall consent, Debtor will not do any act, or omit to do any act, whereby the Patents may become abandoned or dedicated and shall notify the Secured Party immediately if it knows of any reason or has reason to know that any application or registration may become abandoned or dedicated.

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(c) Debtor will promptly pay the Secured Party for any and all sums, costs, and expenses which the Secured Party may pay or incur pursuant to the provisions of this Agreement or in enforcing the Obligations, the Collateral or the security interest granted hereunder, including, but not limited to, all filing or recording fees, court costs, collection charges, travel, and reasonable attorneys' fees, all of which together with interest at the highest rate then payable on the Obligations shall be part of the Obligations and be payable on demand.

(d) In no event shall Debtor, either itself or through any agent, employee, licensee or designee, file an application for the registration of any Patent with the United States Patent and Trademark Office or any similar office or agency in any other country or any political subdivision thereof, unless it will promptly inform the Secured Party, and, upon request of the Secured Party, execute and deliver any and all assignments, agreements, instruments, documents and papers as the Secured Party may request to evidence the Secured Party's interest in such Patent and the goodwill and general intangibles of Debtor relating thereto or represented thereby and Debtor hereby constitutes the Secured Party its attorney-in-fact to execute and file all such writings for the foregoing purposes, all acts of such attorney being hereby ratified and confirmed; such power being coupled with an interest is irrevocable until the Obligations are paid in full.

(e) Debtor has the right and power to make the assignment and to grant the security interest herein granted; and the Collateral is not now, and at all times will not be, subject to any liens, mortgages, assignments, security interests or encumbrances of any nature whatsoever, except in favor of the Secured Party and to the best knowledge of Debtor none of the Collateral is subject to any claim.

(f) Except to the extent that the Secured Party, upon prior written notice of Debtor, shall consent, Debtor will not assign, sell, mortgage, lease, transfer, pledge, hypothecate, grant a security interest in or lien upon, encumber, grant an exclusive or non-exclusive license, or otherwise dispose of any of the Collateral, and nothing in this Agreement shall be deemed a consent by the Secured Party to any such action except as expressly permitted herein.

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(g) As of the date hereof Debtor nor any affiliate or subsidiary thereof has any Patents registered in, or the subject of pending applications in, the United States Patent and Trademark Office or any similar office or agency in any other country or any political subdivision thereof other than those described in Schedules A hereto.

(h) Debtor will take all necessary steps in any proceeding before the United States Patent and Trademark Office or any similar office or agency in any other country or any political subdivision thereof, to maintain each application and registration of the Patents, including, without limitation, filing of renewals, affidavits of use, affidavits of incontestability and opposition, interference and cancellation proceedings (except to the extent that dedication, abandonment or invalidation is permitted under paragraphs 2(c) and 2(d) hereof).

3. Upon the occurrence of an Event of Default (as defined in the Loan Agreement or Note) (whenever used herein, the term "Event of Default" having such meaning), in addition to all other rights and remedies of the Secured Party, whether under law, the Loan Agreement, [the Note, as defined therein,] or otherwise, all such rights and remedies being cumulative, not exclusive and enforceable alternatively, successively or concurrently, without (except as provided herein) notice to, or consent by, Debtor, the Secured Party shall have the following rights and remedies: (a) Debtor shall not make any use of the Patents for any purpose; (b) the Secured Party may, at any time and from time to time, upon 10 days' prior notice to Debtor, license, whether general, special or otherwise, and whether on an exclusive or non-exclusive basis, any of the Patents throughout the world for such term or terms, on such conditions, and in such manner, as the Secured Party shall in its sole discretion determine; (c) the Secured Party may (without assuming any obligations or liability thereunder), at any time, enforce (and shall have the exclusive right to enforce) against any licensee or sublicensee all rights and remedies of Debtor in, to and under any one or more license agreements with respect to the Collateral, and take or refrain from taking any action under any thereof, and Debtor hereby releases the Secured Party from, and agrees to hold the Secured Party free and harmless from and against any claims arising out of, any action taken or omitted to be taken with respect to any such license agreement; (d) the Secured Party may, at any time and from time to time, upon 10 days' prior notice to Debtor, assign, sell, or otherwise dispose of, the

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Collateral or any of it, either with or without special or other conditions or stipulations, with power to buy the Collateral or any part of it, and with power also to execute assurances, and do all other acts and things for completing the assignment, sale or disposition which the Secured Party shall, in its sole discretion, deem appropriate or proper; and (e) in addition to the foregoing, in order to implement the assignment, sale or other disposal of any of the Collateral pursuant to subparagraph 3(d) hereof, the Secured Party may, at any time, pursuant to the authority granted in the Powers of Attorney described in paragraph 4 hereof (such authority becoming effective on the occurrence or continuation as hereinabove provided of an Event of Default), execute and deliver on behalf of Debtor, one or more instruments of assignment of the Patents (or any application or registration thereof), in form suitable for filing, recording or registration in any country. Debtor agrees to pay when due all reasonable costs incurred in any such transfer of the Patents including any taxes, fees and reasonable attorneys' fees, and all such costs shall be added to the Obligations. The Secured Party may apply the proceeds actually received from any such license, assignment, sale or other disposition to the reasonable costs and expenses thereof, including, without limitation, reasonable attorneys' fees and all legal, travel and other expenses which may be incurred by the Secured Party, and then to the Obligations, in such order as to principal or interest as the Secured Party may desire; and Debtor shall remain liable and will pay the Secured Party on demand any deficiency remaining, together with interest thereon at a rate equal to the highest rate then payable on the Obligations and the balance of any expenses unpaid. Nothing herein contained shall be construed as requiring the Secured Party to take any such action at any time.

In the event of any such license, assignment, sale or other disposition of the Collateral, or any of it, after the occurrence or continuation as hereinabove provided of an Event of Default, Debtor shall supply its know-how and expertise relating to the manufacture and sale of the products bearing or in connection with the Patents, and its customer lists and other records relating to the Patents and to the distribution of said products, to the Secured Party or its designee.

4. Concurrently with the execution and delivery hereof, Debtor is executing and delivering to the Secured Party, in the form of Exhibit B hereto, five originals of a Power of Attorney for the implementation of the assignment, sale or other disposal of the Patents pursuant to paragraphs 3(d) and (e) hereof and

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PATENT
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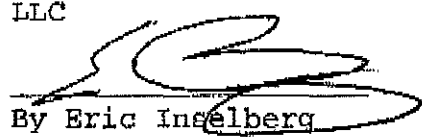
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Debtor hereby releases the Secured Party from any claims, causes of action and demands at any time arising out of or with respect to any actions taken or omitted to be taken by the Secured Party, under the powers of attorney granted herein other than actions taken or omitted to be taken through the gross negligence or willful misconduct of the Secured Party.

5. No provision hereof shall be modified, altered or limited except by a written instrument expressly referring to this Agreement and executed by the party to be charged. The execution and delivery of this Agreement has been authorized by a Resolution of Debtor. This Agreement shall be binding upon the successors, assigns or other legal representatives of Debtor, and shall, together with the rights and remedies of the Secured Party hereunder, inure to the benefit of the Secured Party, his heirs at law, successors, assigns or other legal representatives. This Agreement, the Obligations and the Collateral shall be governed in all respects by the laws of the United States and the laws of the State of New Jersey. Debtor hereby submits to the nonexclusive jurisdiction of the Superior Court of the State of New Jersey and the federal courts of the United States of America located in such State in any action or proceeding arising under this Security Agreement. If any term of this Agreement shall be held to be invalid, illegal or unenforceable, the validity of all other terms hereof shall in no way be affected thereby.

In Witness Whereof, Debtor and the Secured Party have caused this Agreement to be executed by their respective officers thereunto duly authorized as of the day and year first above written.

Inselberg Interactive,
LLC



By Eric Inselberg
Managing Member

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STATE OF NEW JERSEY
COUNTY OF *Somerset* SS.:

I CERTIFY that on *AUGUST 17*, 2010

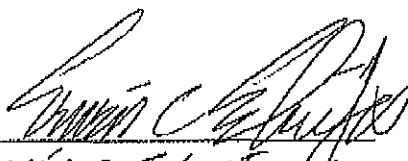
Eric Inselberg the Managing Member of Inselberg Interactive, LLC

personally came before me and stated to my satisfaction, that this person (or if more than one, each person):

(a) was the maker of the attached Document on behalf of Inselberg Interactive, LLC;

(b) executed this Document as his own voluntary act, as the managing member of Inselberg Interactive, LLC; and,

(c) this document was signed and made by the Limited Liability Company as its voluntary act and deed by virtue of authority from its members.



Brian C. Schwitzky
An Attorney at Law of
The State of New Jersey

Schedule A to Security Agreement

PATENTS Attached Hereto

PATENT PORTFOLIO OF ERIC INSELBERG

Entitled: METHODS, SYSTEMS AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE EN

Docket Number	Country	Relation Type	Filing Type	Status	Application Number	Application Date	Patent Number
U.S. Granted Patents							
0128-1	United States	Original Filing	National	Granted	09/656,096	09/06/2000	6,434,398
0128-1 CON	United States	Continuation	National	Granted	09/854,267	05/11/2001	6,650,903
0128-1 CON2	United States	Continuation	National	Granted	10/661,871	09/12/2003	6,975,878
0128-1 CON3	United States	Continuation	National	Granted	11/266,783	11/04/2005	7,123,930
0128-1 CON4	United States	Continuation	National	Granted	11/542,619	10/04/2006	7,522,930
0128-1 CON 6	United States	Continuation	National	Granted	11/894,189	08/20/2007	7,424,304
0128-1 CON CIP	United States	Continuation-In-Part	National	Granted	10/378,582	03/05/2003	6,760,595
0128-1 CON CIP2	United States	Continuation-In-Part	National	Granted	10/792,170	03/03/2004	6,996,413
0128-1 CON CIP3	United States	Continuation-In-Part	National	Granted	11/300,206	12/14/2005	7,248,888
0128-1 CON CIP4	United States	Continuation-In-Part	National	Granted	11/347,993	02/06/2006	7,263,378
0128-1C-CIP3CIP	United States	Continuation-In-Part	National	Granted	11/725,759	03/20/2007	7,587,214
0128-1 CON5	United States	Continuation	National	Filed	11/894,163	08/20/2007	
0128-1 CON 7	United States	Continuation	National	Filed	12/228,908	08/18/2008	
0128-1 CON C4C	United States	Continuation-In-Part	National	Filed	11/799,139	05/01/2007	
0128-1 CON CIP5	United States	Continuation-In-Part	National	Filed	12/465,524	06/18/2009	
Application Not Yet Filed							

PATENT
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12/13/2005
10/17/2006
04/21/2009
09/09/2009
07/06/2004
02/07/2006
07/24/2007
08/28/2007
09/08/2009
04/06/2010

RECORDED: 09/07/2010

PATENT
REEL: 025017 FRAME: 0396

EXHIBIT 5

AGREEMENT

THIS AGREEMENT is entered into by and between Inselberg Interactive LLC ("Interactive"), a New Jersey limited liability company, having a place of business at 26 Catamaran Court, Mount Arlington, New Jersey 07856, Eric Inselberg, an individual having an address at 26 Avenue at Port Imperial, Apartment 211, West New York, New Jersey 07093 ("Inselberg"), and Frank Bisignano, an individual having an address at 5 Jared Court, Watchung, New Jersey, 07069 ("Bisignano"), wherein Interactive, Inselberg and Bisignano may be collectively referred to herein as the "Parties" or individually as a "Party" and wherein Interactive and Inselberg may be collectively referred to herein as "Assignors."

WHEREAS, the Parties entered into that certain Loan Agreement dated August 2010 (the "Loan Agreement"); and

WHEREAS, pursuant to the Loan Agreement, and the documents, instruments and agreements executed in connection therewith (collectively, the "Loan Documents") Bisignano loaned Interactive \$500,000.00, wherein such loan was guaranteed by Eric Inselberg and Martha Ard; and

WHEREAS, Interactive has failed to comply with the terms of the Loan Agreement and previously defaulted thereof on April 2, 2012; and

WHEREAS, Interactive wishes to transfer, convey and assign all of its right, title and interest in and to the Transferred IP (as defined below) in partial payment and satisfaction of the indebtedness and other obligations under the Loan Agreement and the other Loan Documents and Bisignano is willing to accept such Patents in partial payment and satisfaction of the indebtedness and other obligations under the Loan Agreement and the other Loan Documents, in each case, upon the terms and conditions contained herein.

NOW THEREFORE, in consideration of the mutual promises set forth herein and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto agree as follows:

A. CONVEYANCE

1. Interactive does hereby confirm and memorialize the previous assignment, transfer, conveyance, and delivery to Bisignano, free and clear of all liens and other encumbrances, all right, title and interest in, to, and under the patents and patent applications listed in Exhibit A hereto, wherein the assignment further included (i) any and all applications filed in any country based on any such patents or patent applications, (ii) the right to file applications in countries other than the country of priority filing under the provisions of any international convention, (iii) all patent rights and potential patent rights to any and all inventions disclosed in any of the foregoing, and (iv) the right to sue for and collect damages for acts occurring prior to the effective date of this agreement and/or thereafter. The assignment further included the entire right, title, and interest in and to any and all patents, including reissues and extensions thereof, to be obtained in any country upon said inventions, and any and all continuing applications, including divisional, continuation and continuation-in-part applications, substitute applications,

and applications claiming benefit of an earlier filed provisional application, which may be filed upon any of said inventions in any country. The foregoing shall be collectively be referenced herein as the "Transferred IP".

2. To the extent that some or all of the patents and patent applications listed in Exhibit A as "Non-U.S. Patents and Patent Applications" have been collaterally assigned to Bisignano in the Loan Agreement and that such collateral assignment would have been released upon the indefeasible payment in full in cash of all of the outstanding indebtedness and other loan amounts in full and further requiring potential future payment by Bisignano to Inselberg upon realization of proceeds related to such patents or patent applications, any such obligation of transferring such patents and patent applications back to Inselberg and any requirement for payments by Bisignano are hereby waived in full and this Agreement effects a complete and unconditional transfer of such patents and patent applications pursuant to the terms herein.

3. To the extent that Inselberg retains or retained any interest in the Transferred IP, Inselberg does hereby confirm and memorialize the previous assignment, transfer, conveyance, and delivery to Bisignano, free and clear of all liens and other encumbrances, all such right, title and interest in, to, and under the Transferred IP.

4. Interactive and Inselberg individually and independently agree to execute such documents, render such assistance, and take such other actions as Bisignano may request to apply for, prosecute, obtain, enforce, register, perfect, confirm, record, and/or protect the Transferred IP or the ownership thereof.

5. In reliance on the representations and warranties contained herein, and subject the terms and conditions contained herein, including, without limitation Section C 11., Bisignano has accepted the Transferred IP in partial satisfaction of the indebtedness and other outstanding obligations under the Loan Documents.

B. REPRESENTATIONS AND WARRANTIES

The following representations and warranties are confirmed as integral and material to the conveyance of the Transferred IP and memorialized above:

1. Assignors individually and independently represent and warrant that Interactive is the owner of all right, title, and interest in, to, and under the Transferred IP free and clear of all security interests, liens, claims and other encumbrances except for any security interest held by Bisignano. Assignors individually and independently represent and warrant that no transfer has been made to any third party of any right, title, or interest in, to, or under the Transferred IP, including, without limitation, any license whether exclusive or non-exclusive.

2. Interactive represents and warrants that it is not involved in any bankruptcy proceeding and has not been involved in any bankruptcy proceeding within twelve (12) months of this Agreement.

3. Inselberg represents and warrants that he is not involved in any bankruptcy proceeding and has not been involved in any bankruptcy proceeding within twelve (12) months of this Agreement.

4. Assignors individually and independently represent and warrant that the conveyed IP is valid and enforceable.

5. Interactive represents and warrants that it has the authority to complete the transfer contemplated in this Agreement and that it has not made any transfer to any third party of any rights that would otherwise be contemplated by this Agreement. Inselberg represents and warrants that he has the authority to complete the transfer contemplated in this Agreement and that he, in his individual capacity or on behalf of Interactive, has not made any transfer to any third party of any rights that would otherwise be contemplated by this Agreement.

6. Assignors individually and independently represent and warrant that all patents and patent applications listed in Exhibit A are in good standing.

7. Inselberg represents and warrants that he is the true, correct, and sole inventor of the inventions claimed in the patents and patent applications listed in Exhibit A and that all rights, title, and interest previously held by him in the patents and patent applications listed in Exhibit A have been properly assigned to Interactive.

8. Assignors individually and independently represent and warrant there are no suits, actions or proceedings that are pending or threatened that involve any Assignor or any one or more of the patents and patent applications listed in Exhibit A or any invention disclosed therein.

9. The foregoing representations and warranties shall survive the execution and delivery of this Agreement.

C. MISCELLANEOUS

1. The rights granted to Bisignano are fully transferable and assignable, and all representations and warranties shall inure to the benefit of any assignees or licensees of Bisignano.

2. This Agreement shall be governed and interpreted in accordance with the laws of the State of New Jersey without giving effect to conflict of laws provisions. The Parties hereby consent to personal jurisdiction in New Jersey for any purposes relating to either this Agreement or the subject matter of this Agreement, and any suit relating to a breach of this Agreement shall be filed in the United States District Court for the District of New Jersey to the extent that subject matter jurisdiction is proper and otherwise in the courts of the State of New Jersey.

3. Interactive and Inselberg each represent and warrant that they have independently entered into this Agreement freely and have obtained independent legal advice or have had the opportunity to obtain independent legal advice concerning this Agreement.

4. Each Party represents and warrants that it is authorized to enter into this Agreement and that the person executing this Agreement on its behalf has the capacity, full power and authority to bind it to each and every provision of this Agreement.

5. This Agreement constitutes the entire agreement between the Parties with respect to settlement of the Action and supersedes all prior written or oral agreements and understandings

between the Parties with respect to such subject matters. This Agreement may not be amended except by a written agreement executed by the Parties hereto. Each Party hereby represents that it has not relied on any promise, inducement, representations or other statement made in connection with this Agreement that is not expressly contained herein. Under this Agreement, neither Party makes any representation or extends any warranties, express, implied, or statutory, nor assumes any liabilities or responsibilities not explicitly set forth herein.

6. If any provision of this Agreement is determined to be unlawful or otherwise unenforceable, the remaining provisions will nevertheless continue in full force and effect unless to do so would materially alter the bargained for consideration of the Parties in entering into this Agreement.

7. This Agreement does not render either Party hereto the agent of the other Party for any purpose whatsoever, nor does either party thereto have the right or authority to assume, create or incur any liability of any kind, express or implied, against or in the name or on behalf of the other Party.

8. This Agreement may be executed in one or more counterparts, each of which will be deemed to be an original copy of this Agreement and all of which, when taken together, will be deemed to be an original copy of this Agreement. Facsimile execution and delivery of this Agreement is legal, valid and binding execution and delivery for all purposes. The facsimile or electronic signature shall be valid and acceptable for all purposes as if it were an original.

9. This Agreement will be construed without regard to the Party or Parties responsible for preparing it and because it has been and shall be construed to have been drafted by all Parties to it, and the rule of construing ambiguities against the drafter will have no force or effect. Ambiguities or uncertainties in this Agreement will not be interpreted or construed against any Party to this Agreement.

10. Upon execution, this Agreement shall be effective, *nunc pro tunc*, on April 2, 2012.

11. Notwithstanding the foregoing, Interactive and Inselberg acknowledge and agree that their respective obligations and liabilities under the Loan Documents shall be reinstated with full force and effect, if at any time after the effective date of this Agreement (i) all or any portion of the Transferred IP or any other consideration that was transferred or paid to Bisignano in satisfaction of the Loan Documents is voided or rescinded or must otherwise be returned by Bisignano to Interactive as a result of any person's insolvency, bankruptcy or reorganization or otherwise, (ii) at the option of the Bisignano, if any representation or warranty contained herein or otherwise made by any Assignor to Bisignano is false or misleading in any material respect, or, (iii) at the option of the Bisignano, if any person or entity asserts a lien, security interest, license or other encumbrance upon any of the Transferred IP, in each case, all as though such payment or transfer had not been made. Any such reinstatement shall not prejudice or preclude Bisignano from seeking and recovering any additional remedies.

12. The Parties acknowledge and agree that the law firm of Nelson Mullins Riley & Scarborough LLP ("Nelson Mullins") (i) solely represents Jansome Patent Opportunities Fund, who has served as a consultant in this transaction, (ii) has not represented and does not represent

any Party to this Agreement, and (iii) has not conducted any diligence concerning this Agreement.

13. The headings of sections of this Agreement are for convenience of reference only and shall not affect the meaning or interpretation of this Agreement in any way.

14. In order to be effective, any waiver of any right under this Agreement must be in writing signed by an authorized representative of the Party making the waiver.

IN WITNESS WHEREOF, the Parties have caused this Agreement to be executed by their respective duly authorized representatives.

ASSIGNOR:

Inselberg Interactive LLC

By: 

Name: Eric Inselberg

Title: Managing Member

Date: 1/29/13

Eric Inselberg

By: 

Name: Eric Inselberg

Date: 1/29/13

ASSIGNEE:

Frank Bisignano

By: 

Name: Frank Bisignano

Date: 2.4.13

EXHIBIT A**United States Patents and Patent Applications**

Application No.	Patent No.	Publication No.
09/656,096	6,434,398	N/A
09/854,267	6,650,903	2002-0029381
10/661,871	6,975,878	2004-0058697
11/266,783	7,123,930	2006-0068824
11/542,819	7,522,930	2007-0026791
11/894,163	7,860,523	2007-0287489
12/927,580	8,131,279	2011-018994
13/385,740	N/A	2012-0185324
11/894,189	7,424,304	2007-0287378
12/228,908	7,856,242	2009-0061917
12/927,581	8,023,977	2011-0070916
13/200,145	8,213,975	2012-003486
13/507,131	N/A	2012-0252499
12/381,701	7,693,532	2009-0177533
10/378,582	6,760,595	2003-0144017
10/792,170	6,996,413	2004-0171381
11/300,208	7,248,888	2006-0094409
11/725,759	7,587,214	2007-0197247
11/347,993	7,263,378	2006-0154657
11/799,139	7,792,539	2007-0202900
12/456,524	7,797,005	2009/0276292
12/799,858	N/A	2010-0306064

Non-U.S. Patents and Patent Applications

Australian Patent No. 2001287073
 Canadian Patent No. 2,422,168
 Australian Patent No. 2004216690
 Canadian Patent No. 2518215

EXHIBIT 6

ASSIGNMENT

This Assignment, effective as of April 2, 2012 (hereinafter the "Effective Date"), is made by and between Inselberg Interactive LLC ("Interactive"), a New Jersey limited liability company, having a place of business at 26 Catamaran Court, Mount Arlington, New Jersey 07856, and Frank Bisignano, an individual having an address at 5 Jared Court, Watchung, New Jersey 07069.

WHEREAS, as of the Effective Date, Interactive has ownership of certain patents and applications as listed on Attachment A;

WHEREAS, Bisignano desires to obtain complete and sole ownership of the patents and patent applications listed on Attachment A pursuant to the terms of an Agreement effective on April 2, 2012;

NOW, THEREFORE, FOR GOOD AND VALUABLE CONSIDERATION, the receipt of which is hereby acknowledged, Interactive, as of the Effective Date does hereby, sell, assign and transfer to Bisignano, his successors and assigns, the entire right, title and interest in and to patents and patent applications listed on Attachment A, and also including any and all applications filed in any country based on any such patents or patent applications, (ii) the right to file applications in countries other than the country of priority filing under the provisions of any international convention, (iii) all patent rights and potential patent rights to any and all inventions disclosed in any of the foregoing, and (iv) the right to sue for and collect damages for acts occurring prior to the effective date of this agreement and/or thereafter. This assignment further includes the entire right, title, and interest in and to any and all patents, including reissues and extensions thereof, to be obtained in any country upon said inventions, and any and all continuing applications, including divisional, continuation and continuation-in-part applications, substitute applications, and applications claiming benefit of an earlier filed provisional application, which may be filed upon any of said inventions in any country. Interactive further authorizes and requests the issuing authority to issue any and all patents on any of said application or applications to Bisignano, as assignee of the entire interest.

IN TESTIMONY WHEREOF, I have hereto set my hand on the date set after my signature.

ASSIGNOR:

Inselberg Interactive LLC

By: 

Name: Eric Inselberg

Title: Managing Member

Date: 1/29/13

ASSIGNEE:

Frank Bisignano

By: 

Name: Frank Bisignano

Date: 2-4-13

ATTACHMENT A**United States Patents and Patent Applications**

Application No.	Patent No.	Publication No.
09/656,096	6,434,398	N/A
09/854,267	6,650,903	2002-0029381
10/661,871	6,975,878	2004-0058697
11/266,783	7,123,930	2006-0068824
11/542,819	7,522,930	2007-0026791
11/894,163	7,860,523	2007-0287489
12/927,580	8,131,279	2011-018994
13/385,740	N/A	2012-0185324
11/894,189	7,424,304	2007-0287378
12/228,908	7,856,242	2009-0061917
12/927,581	8,023,977	2011-0070916
13/200,145	8,213,975	2012-003486
13/507,131	N/A	2012-0252499
12/381,701	7,693,532	2009-0177533
10/378,582	6,760,595	2003-0144017
10/792,170	6,996,413	2004-0171381
11/300,208	7,248,888	2006-0094409
11/725,759	7,587,214	2007-0197247
11/347,993	7,263,378	2006-0154657
11/799,139	7,792,539	2007-0202900
12/456,524	7,797,005	2009/0276292
12/799,858	N/A	2010-0306064

Non-U.S. Patents and Patent Applications

Australian Patent No. 2001287073
 Canadian Patent No. 2,422,168
 Australian Patent No. 2004216690
 Canadian Patent No. 2518215

EXHIBIT 7

Agreement to Amend and Terminate Patent Portfolio License Agreement

This Agreement, effective as of the 2nd day of April, 2012 (the "Effective Date"), is by and between Inselberg Interactive, LLC, a New Jersey limited liability company ("Licensor"), and Eric Inselberg ("Licensee"), for the purpose of amending certain terms of the Patent Portfolio License Agreement (the "License Agreement"), dated as of March 17, 2010, a copy of which is attached hereto as Exhibit A, and terminating the license granted pursuant thereto.

WHEREAS, Licensee is the inventor of inventions disclosed in a number of related patents (the "Patent Portfolio");

WHEREAS, Licensee assigned the Patent Portfolio to Licensor in 2008;

WHEREAS, on March 17, 2010, Licensor and Licensee entered into the License Agreement, which granted Licensee an exclusive license to practice certain patent rights in exchange for a waiver of payment for \$600,000.00 owed to Licensee;

WHEREAS, an Assignment of Licensor's Patent Portfolio, effective as of April 2, 2012, was signed by Licensee in his capacity as Managing Member of Licensor on January 29, 2013, transferring all rights and title to the Patent Portfolio to a third-party assignee ("Assignee"); and

WHEREAS, pursuant to Section A(3) of an Agreement relating to the Assignment, Licensee confirmed and memorialized that the Patent Portfolio transferred to Assignee was free and clear of any encumbrances caused by any interest retained by Licensee in the Patent Portfolio;

NOW, THEREFORE, for the mutual promises exchanged and other good and valuable consideration, the sufficiency of which is hereby acknowledged, Licensor and Licensee agree to amend, modify, and terminate the License Agreement as follows:

1. The License Agreement is hereby TERMINATED as of the Effective Date. For the avoidance of doubt, the parties acknowledge that any and all licenses granted by Licensor to Licensee (including without limitation the exclusive license granted pursuant to Section 3.1 of the License Agreement) are revoked, nullified, and voided in their entirety.

2. The amount of payments waived by Licensee as consideration to Licensor pursuant to Section 4.1 of the License Agreement shall be reduced from \$600,000.00 to \$100,000.00, such that the amount of payments due to Licensee by Licensor is now \$2,500,000.00. Should Licensee receive any payments directly from a third party related to the Patent Portfolio, such payments will offset and reduce the amount due to Licensee by Licensor.

3. Any notice requirements prior to termination pursuant to Article V of the License Agreement are eliminated.

4. Except as expressly modified herein, the provisions of the License Agreement that are intended to survive termination shall remain unchanged and shall continue in full force and effect.

Confirmed and accepted by and between:

INSELBERG INTERACTIVE LLC

By:

A handwritten signature in blue ink, consisting of a stylized 'E' followed by a large, loopy 'I' and 'S'.

Eric Inselberg
Managing Member

Date:

2/24/15

AND

ERIC INSELBERG

By:

A handwritten signature in blue ink, identical to the one above, consisting of a stylized 'E' followed by a large, loopy 'I' and 'S'.

Eric Inselberg

Date:

2/24/15

Exhibit A

Patent Portfolio License Agreement

This Agreement, effective as of this 17th day of March, 2010, (herein after "Effective Date") is by and between Inselberg Interactive (herein after referred to as Licensor), a corporation duly organized and existing under the laws of New Jersey, having a registered mailing address of c/o Eric Inselberg, P.O. Box 833, Short Hills, New Jersey 07078, and Eric Inselberg (herein after referred to as "Licensee"), an individual, having his residential address at 26 Avenue at Port Imperial, Apt. 211, West New York, NJ 07093, and mailing address of P.O. Box 833, Short Hills, New Jersey 07078.

Witnesseth:

Whereas, Licensor is the owner of the entire right, title, and interest in and to various United States Patent rights covering methods and apparatus for interactive audience participation at live sporting events including U.S. Patent No.: 6,434,398; 6,650,903; 6,760,595; 6,975,878; 6,996,413; 7,123,930; 7,248,888; 7,263,378; 7,424,304; 7,522,930; and 7,587,214.

Now, THEREFORE, in consideration of the premises and the mutual agreements, covenants, and provisions herein contained, the parties hereto do hereby agree:

Article I. Definitions

For purposes of the Agreement, the following terms will have the following meanings:

- 1.1 The term "Contract Period" will mean the period beginning with the Effective Date of the Agreement and ending on the date that this Agreement terminates in accordance with the provisions of Article V hereof.
- 1.2 The term "Business Method" will mean the patentable subject matter under 35 U.S.C. §101, for conducting business, as defined by current case law during the term of the Agreement.

- 1.3 The term "Collective Patent Rights" will mean and include U.S. Patent No.: 6,434,398; 6,650,903; 6,760,595; 6,975,878; 6,996,413; 7,123,930; 7,248,888; 7,263,378; 7,424,304; 7,522,930; 7,587,214, and all uses, re-uses, continuations, continuations-in-part, divisionals, reissues, re-examinations, and extensions thereof within the Field, with the Field being defined as the NFL, MLB, NBA, and NHL. It will also mean any and all patents filed for, patents licensed by, patents cross-licensed by, covenants not to sue entered into by the Licensor within the Field.
- 1.4 The term "Licensed Collective Patent Rights" will mean and include all enforceable rights under U.S. Patent No.: 6,434,398; 6,650,903; 6,760,595; 6,975,878; 6,996,413; 7,123,930; 7,248,888; 7,263,378; 7,424,304; 7,522,930; 7,587,214, and all uses, re-uses, continuations, continuations-in-part, divisionals, reissues, re-examinations, and extensions thereof within the Field, with the Field being defined as the NFL, MLB, NBA, and NHL. It will also mean any and all patent rights under patents filed for, patents licensed by, patents cross-licensed by, covenants not to sue entered into by the Licensor within the Field.
- 1.5 The term "Licensed Territory" will mean and collectively include United States of America, its territories, and possessions.
- 1.6 The term "Patentable Improvements" will mean only technical developments made by or known to Licensor and/or Licensee during the period of this Agreement which constitutes a patentable addition or modification to the Field.
- 1.7 The term "Irrevocable Judgment" will mean a judgment or decree which becomes not further reviewable through the exhaustion of all permissible applications for rehearing or review by a superior tribunal, or through expiration of the time permitted for such applications.

Article II
Representations and Warranties

- 2.1 Licensor represents and warrants to Licensee:
- (a) Licensor either legally or beneficially owns or controls the entire right, title, and interest in and to the Licensed Collective Patent Rights, including the right (i) to grant licenses under any of the Licensed Collective Patent Rights, and (ii) to enforce any issued patent of the Licensed Collective Patent Rights against any third parties infringing any claim of claims of any patents included in those Patent Rights.
 - (b) All necessary corporate action has been taken by Licensor under the Laws of New Jersey and its Certificate of Incorporation and bylaws to approve the execution and consummation of this Agreement.
- 2.2 Licensee represents and warrants to Licensor that Licensee has all necessary corporate power to enter into and perform its obligations under this Agreement and has taken all necessary corporate action under the laws of Minnesota and its Certificate of Incorporation and bylaws to authorize the execution and consummation of this Agreement.

Article III
Grant of License

- 3.1 Subject to the provisions of Article V, Licensor hereby grants to Licensee an exclusive license at 0% royalty to practice under the Collective Patent Rights as defined herein, anywhere within the Licensed Territory. If this exclusivity provision violated in any way whatsoever, the Licensor shall pay a \$10 million penalty to Licensee, plus a reasonable royalty.

Construction of Patent Claims

- 3.2 If, in any proceeding in which the validity, infringement, or priority of any claim of the Licensed Collective Patent Rights, is in issue, the construction placed upon any such claim by an Irrevocable Judgment thereafter shall be followed not only as to such claim, but also as to all claims to which such construction applies, with respect to acts occurring thereafter; and if such Irrevocable Judgment holds any claim invalid, Licensee shall be relieved thereafter from payment of royalty fees as a percentage of claims held invalid as to the total number of claims licensed under this Agreement.

Infringement of Patent claims

- 3.3 Each Party shall promptly notify the other party of any suspected infringement by any third party of one or more claims of the Licensed Collective Patent Rights.
- 3.4 In the event evidence of potential infringement by a third party is found, the Licensor shall take legal action to abate such infringement within six (6) months of receipt of such evidence. Should Licensor thereafter take legal action to abate such infringement or should the infringing activity cease, Under no circumstances, however, shall Licensor be required to take action against more two (2) such third parties at any time, nor shall Licensor be required to take legal action against a customer of Licensor who is not also a competitor.

Article IV

Consideration for License

- 4.1 As noted in Exhibit "A" of Licensor's Operating Agreement dated January 3, 2009, Licensee is entitled to an allocation of \$2,600,000.00 from Licensor for monies expended, concepts, ideas, and efforts relative to the patents. As due and full consideration for the License granted by this Agreement, Licensee agrees to waive entitlement to payment of \$600,000.00 of the \$2,600,000.00.

Article V
Term and Termination

- 5.1 This Agreement will continue in force for ten (10) years from the Effective Date or until Termination under 5.2 and/or 5.3.
- 5.2 Licensors will have the right to terminate this agreement and all rights hereby granted upon the happening of one or more of the following events:
 - 5.2.1 If the Licensee has adjudicated against it a petition in bankruptcy or judicial or administrative declaration of insolvency; and
 - 5.2.2 If the Licensee commits any breach of the Agreement or undertaking on its part contained herein and fails to remedy that breach within ninety (90) days after written notice thereof to the Licensee by Licensors specifying the nature of the breach. Licensee will have the right to terminate this agreement and all rights hereby granted upon the happening of one or more of the following:
 - 5.2.3 If the Licensee provides three months notice of termination and stops all activities covered under the Licensed Collective Patent Rights; If the patent claims are deemed to be un-enforceable due to the determination that the Business Method class of patent claims are not patentable subject matter under 35 U.S.C §101.
- 5.3 In the event that Licensors no longer holds the rights to the patents, Licensee shall have the right to enter into a new Licensing Agreement, or other alternative agreement with the new owner of the patents under such terms and conditions as Licensee shall deem acceptable.

Article VI
Miscellaneous Provisions

- 6.1 This Agreement will be governed by and interpreted under the laws of the State of New Jersey, regardless of the place of execution or place of performance, and exclusive jurisdiction for any and all legal actions pertaining to this Agreement, shall rest with either the State or Federal Courts located in the State of New Jersey.
- 6.2 This Agreement constitutes the entire understanding between the parties hereto with respect to the subject matter hereof. No modifications, extensions, or waiver of any provisions hereof, or any release of any rights hereunder, will be valid, unless it is in writing and is consented to by both parties hereto.
- 6.3 All terms and provisions of this Agreement will bind and inure to the benefit of the parties hereto and upon the respective successors and assigns of the Licensor and/or Licensee.
- 6.4 All notices required to be given under this Agreement shall be in writing and shall be considered delivered when they are deposited in the U.S. mail, certified first class or air mail, postage prepaid, addressed to the respective parties as follows:

Bart Oates
Inselberg Interactive
One Silver Brook Road
Morristown, NJ 07960

Eric Inselberg
P.O. Box 833,
Short Hills, New Jersey 07078

or to such other addresses as may be designated by the respective parties in writing.

- 6.5 The section titles are for convenience only and are not part of the content of this Agreement.
- 6.6 This Agreement may be executed in counterparts each of which shall constitute but one original.

Inselberg Interactive

By:



Eric Inselberg
Managing Member

Date:

3/17/10

Confirmed and accepted:

Eric Inselberg

By:



Eric Inselberg

Date:

3/17/10

EXHIBIT 8



US006434398B1

(12) **United States Patent**
Inselberg

(10) **Patent No.:** **US 6,434,398 B1**
(45) **Date of Patent:** **Aug. 13, 2002**

(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**

(76) Inventor: **Eric Inselberg**, 1512 Gates Ct., Morris
Plains, NJ (US) 07950

(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.

(21) Appl. No.: **09/656,096**

(22) Filed: **Sep. 6, 2000**

(51) **Int. Cl.**⁷ **H04B 1/38**

(52) **U.S. Cl.** **455/517; 455/575; 463/40;**
463/39; 463/36

(58) **Field of Search** 455/517, 575,
455/550, 414; 463/40-42, 36-39

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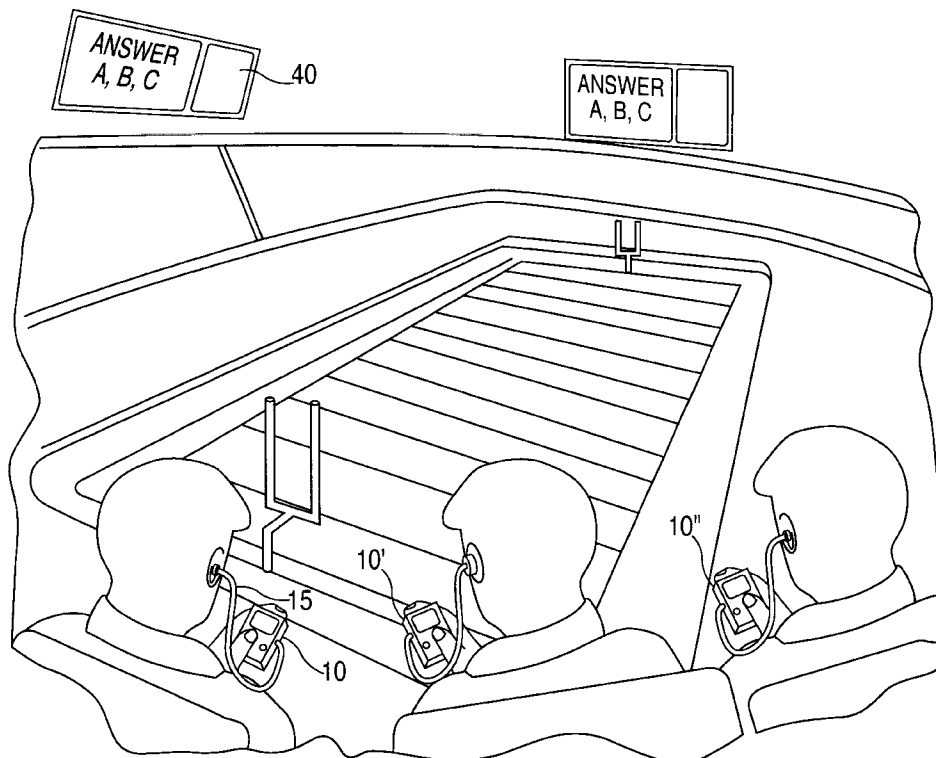
Primary Examiner—Tracy Legree

(74) *Attorney, Agent, or Firm*—Kenyon & Kenyon

(57) **ABSTRACT**

A method for providing interactive audience participation at live spectator events. The method includes providing each spectator with an interactive device that presents a promotional message and includes a user interface, broadcasting audio programming to the spectator through the interactive device, querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device, transmitting the answers to a central processor, storing the answers as spectator data, processing the spectator data into results, storing the results of the processing of the spectator data and broadcasting the results of the processing of the spectator data.

13 Claims, 2 Drawing Sheets



U.S. Patent

Aug. 13, 2002

Sheet 1 of 2

US 6,434,398 B1

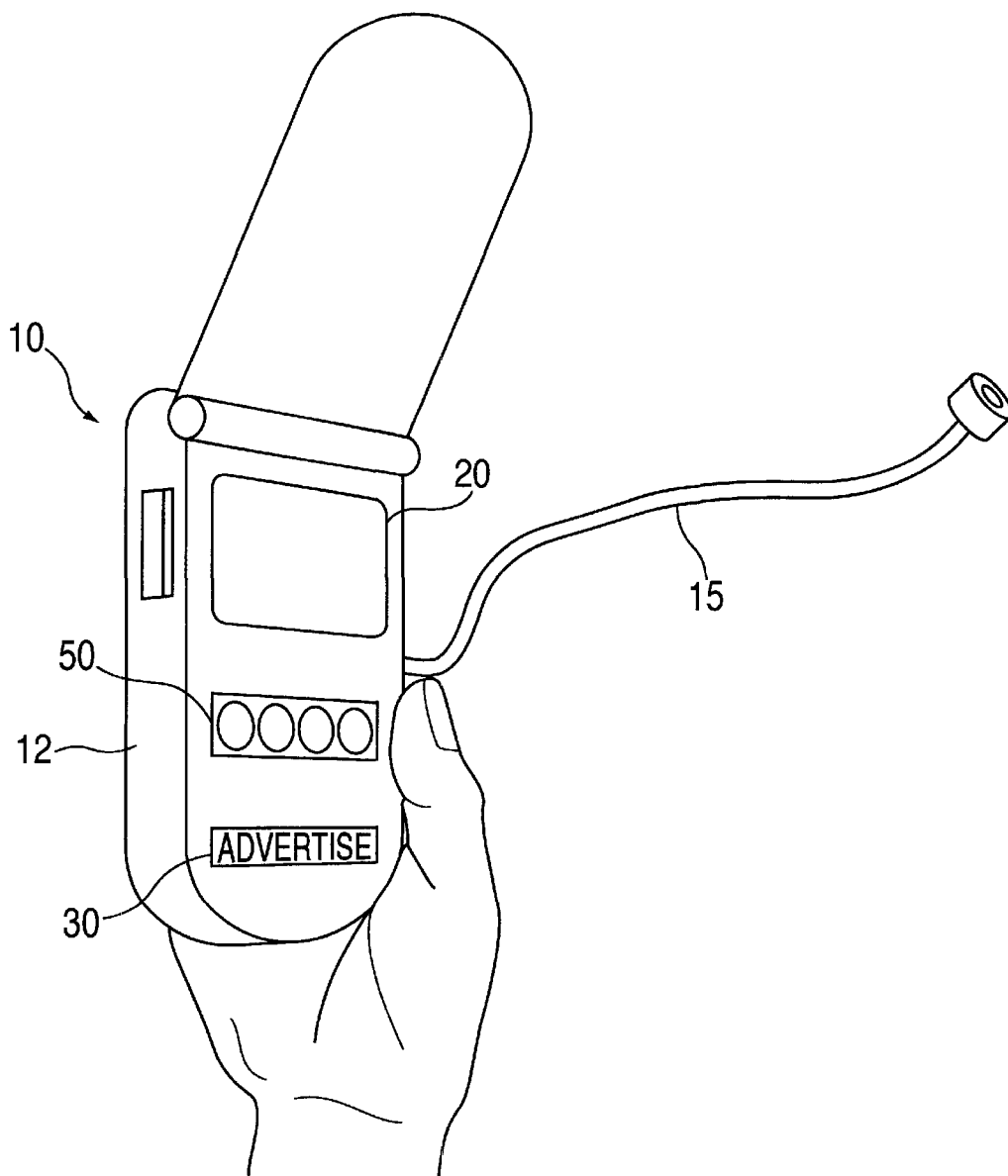
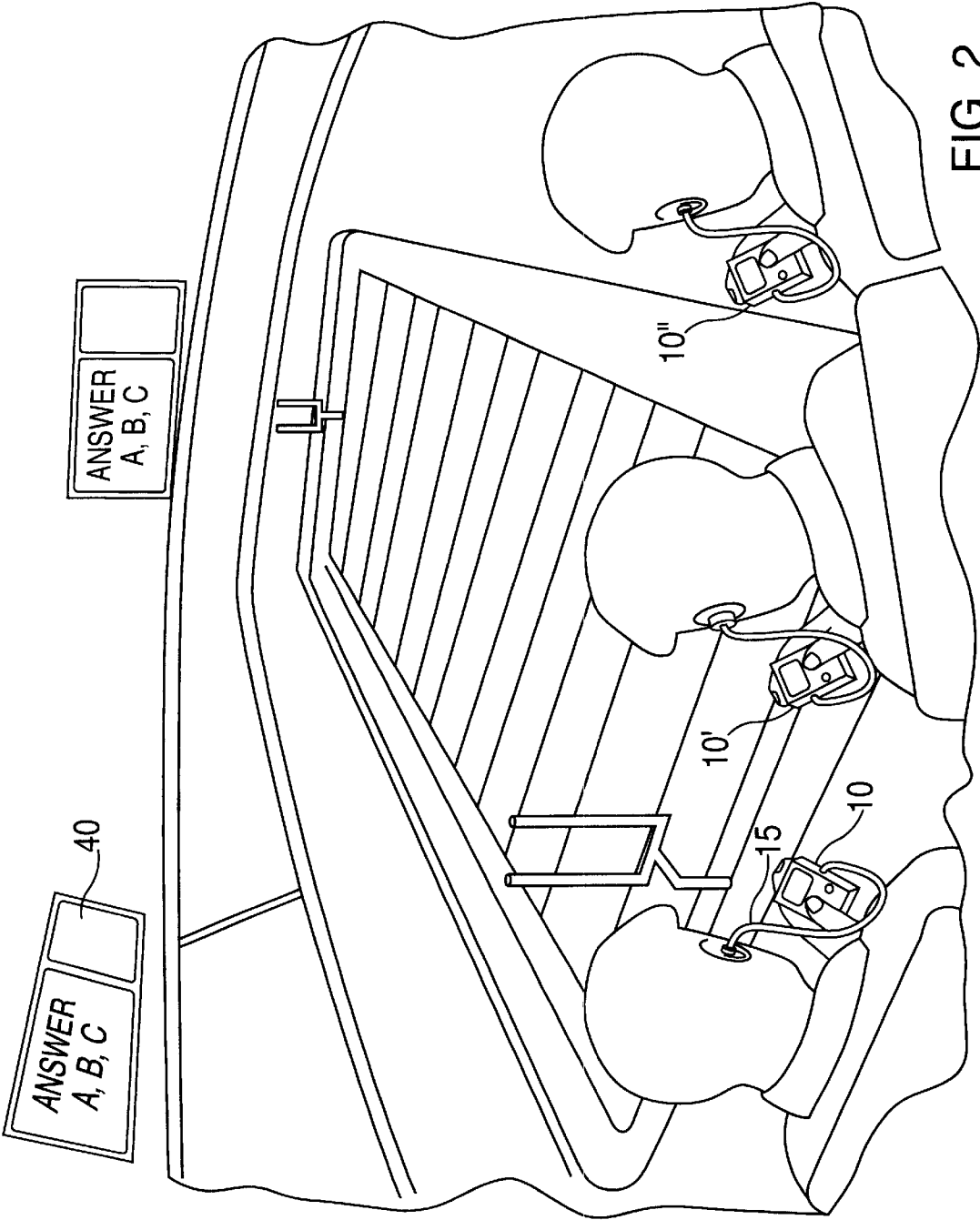


FIG. 1



**METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**

FIELD OF THE INVENTION

The present invention relates to a method for interactive audience participation at a live spectator event. The invention also relates to an apparatus that is used in connection with such method.

BACKGROUND OF THE INVENTION

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live spectator events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON®. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live spectator events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a sports team. Accordingly, in order to continue attracting live audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and expressing one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally, fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of

other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, sometimes the seat location of the attendee fails to offer an unobstructed view. On other occasions a technical ruling may be made by a game official that is not fully explained to those in attendance but is fully analyzed by television and/or radio announcers.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of audience members at live spectator events by more fully involving the audience. In a preferred embodiment of the invention, the method of enhancing audience participation comprises communicating information to fans at a sporting event using an interactive device that allows fans to respond to displayed messages. Individual fan feedback is stored, processed (e.g., tabulated) and displayed back to the individual fan or the audience as a whole. The interactive device is preferably a wireless, hand held device, which includes an audio component to allow the user to listen to play-by-play and expert commentary during the live event. The audio component may also provide spectators with other desirable information such as traffic and weather reports. Since the device is easily transported, the fan can carry it on trips to the concession stands or to the restrooms. Further, the method presents promotional messages of sponsors and advertisers to each user of the interactive device. The promotional message may be permanently affixed to the device and/or transmitted to each device via open band lines. In a more specific method, the location of individual fans is identified by means of a transceiver located within the interactive device.

The method can be used to conduct contests wherein a fan is asked to predict the next event or events to take place (e.g. the outcome of the next at bat in a baseball game or the next play or plays to be called in a football game on a real time basis, all star balloting, pitching changes, etc.). Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the fan selects from a list of promptings and/or possible answers. A fan who correctly predicts a predetermined number of outcomes may be awarded an electronic coupon that can be redeemed for concessions and/or other prizes. Alternatively, the prize could be delivered to the fan based on the location of the fan's interactive device by means of communication with the transceiver located therein.

One advantage of the invention is that promotional messages and advertisements receive a higher degree of attention from fans, because the fans are more interested in the interactive content than in passively viewing or listening to broadcast messages.

Another advantage of the invention is that it is possible to receive instantaneous and correlated feedback from a large number of fans, which is valuable information for, by way of example, sponsors, teams and leagues.

A further advantage of the invention is that fans value the expert commentary, freedom of movement and the interactivity afforded by the method, increasing their enjoyment and the perceived value of attending a live sporting event.

Other objects, features and advantages of the invention will be readily apparent from the following detailed description of a preferred embodiment thereof taken in conjunction with the drawings.

BRIEF DESCRIPTION OF THE FIGURES

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of hand held device used in connection with the interactive audience participation system of the present invention.

FIG. 2 is a schematic diagram of audience members at a spectator event utilizing the interactive audience participation system of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is shown in FIG. 1 a hand held, interactive device 10 adapted for use in connection with the interactive audience participation system of the present invention.

The device is preferably provided to audience members at a live spectator event as shown in FIG. 2. The device is adapted to provide information to the user. In a preferred embodiment the device 10 includes a housing 12 with an electronic display opening. The device 10 preferably includes a multiband radio incorporated therein with an audio receiving circuit and an audio output means (not shown). The audio output means is in electrical communication with the audio receiving circuit in a manner known in the art. The radio is adapted to receive AM, FM and/or VHF signals from a number of predetermined frequencies.

An ear piece 15 is included to allow the user to listen to the radio associated with the device without annoying neighboring fans. It is noted that other listening means could be employed such as ear phones and the like.

An electronic display (visual display) 20 is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display is in electrical communication with a local microprocessor mounted within the housing. A transceiver in electrical communication with the local microprocessor allows for the transmission and receipt of data from a central processor (not shown) in a manner known in the art. The electronic display is adapted to display data received from the local microprocessor. For example, the visual display is adapted to display messages that ask the audience member to answer a question or provide an opinion. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display.

The device 10 preferably presents promotional messages from sponsors and/or advertisers, essentially underwriting the cost of a user interface device. Such messages can be in the form of indicia 30 located (e.g., physically imprinted) on the device. Additionally, the messages can be visually displayed on the visual display 20 of the device or can be aurally communicated through the same. The messages can be in the form of pre-programmed visual messages or recordings or can be transmitted live during the spectator event via open band lines. The device is preferably provided

to each audience member as part of the price of admission or, alternatively, as an optional item purchased by the audience member, and subsidized by the promotional messages.

In one embodiment, a large screen display 30, as depicted in FIG. 2, remotely located from the fan (e.g., a JUMBOTRON® display) is used for querying users of the interactive device. A user interface 50 on the device 10 allows an audience member to enter a response to queries. Examples of simple user interfaces are a keypad, selection buttons, touch screen, rotatable dial or voice recognition, but any other user interface could be incorporated within the invention. In an alternate embodiment, the user interface device is adapted to interact with other fans by allowing for the broadcasting of messages to all audience members or, alternatively, from one individual audience member to another. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

The responses of the audience members are sent to a central processor (not shown) that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device 10 or a large screen display 40 remotely located from the fan. FIGS. 1 and 2. The processed information could be a compilation of the number of similar responses or as a percentage of total responses or graphically in a bar chart, pie chart or some other graphical, numerical or combined graphical and numerical representation of the data.

One representative embodiment of the present invention is a method of enhancing the enjoyment of spectators at live entertainment venues. In the first step of the method, spectators are provided with an interactive device 10, 10' and 10". FIG. 2. The interactive device may be any device which permits broadcast of audio or video or both audio and video and provides the spectator with a user interface for sending replies to queries. The interactive device is adapted to present promotional messages either by placing the same on the device or by visually or aurally transmitting messages through the same.

Optionally, the device could be used to send messages to another fan, group of fans or all fans. This feature could be enabled in a manner similar to email by having a unique address programmed in each device. Optionally, the users could be queried to input a section and seat number. Inputting a seat number has the additional benefit of allowing delivery of awards, incentives and prizes directly to the spectator's seat. Another way to deliver prizes to spectators would be completely electronic. An award could be sent electronically to the unique address programmed in the interactive device, which could then be redeemed at either a central location or at one of the concession stands. This could be done without entering a seat number.

Another step involves broadcasting audible programming to spectators, using the interactive device. This is accomplished by incorporating an audio receiving circuit within the device which is adapted to receive RF and/or VHF signals at predetermined frequencies.

Querying of spectators, wherein answers may be entered by spectators using their interactive devices, is yet another step of the method.

Transmitting the answers from the spectators to a receiver or receivers is the next step in the method followed by receiving the answers, either at a central processing station or at distributed processing stations.

Storing the answers, at least temporarily, as spectator data, and processing the spectator data are additional steps in the

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method. This is followed by storing the results of the processing of the spectator data, at least temporarily.

Displaying the results of the processing of the spectator data is a step that generally follows the processing of the spectator data. This provides feedback to the spectators, showing them how their answers compared to other spectators. The steps of querying, transmitting, receiving, storing and displaying may all be accomplished via technology known in the art. Additionally, the steps of querying and transmitting are preferably achieved using wireless communications known in the art. The wireless communications are preferably selected from the group consisting of radio transmissions, microwave transmissions, broadband wireline data transmissions, and satellite transmissions.

The offering of prizes to a selected spectator or spectators who have responded to the querying, participated in the interactive games or answered correctly quiz questions may be utilized to enhance the enjoyment of spectators.

Another optional embodiment of the method allows for wireless transmitting of the answers and/or responses to the querying.

Ultra-wide band transmission is a promising technology for the broadcasting of messages and transmission of spectators responses. It has the advantage of multiplexing over a single frequency.

It is contemplated that the step of displaying the results may be achieved by using a stadium large screen display. Alternatively, the step of displaying the results may be achieved using a stadium monitor system or using a display incorporated in the interactive device or such information may be broadcast as audibly or both audibly and visibly.

The present invention may be embodied in other forms without departing from the spirit or essential attributes thereof and accordingly reference should be made to the claims rather than to the foregoing specification as indicating the scope thereof.

What is claimed is:

1. A method for interactive audience participation at a live event attended by a plurality of spectators comprising the steps of:
- providing each of the spectators at the live event with an interactive device, wherein the interactive device presents a promotional message and wherein the interactive device includes a user interface;
 - broadcasting audio programming to the spectator through the interactive device;
 - querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device;
 - transmitting the answers to a central processor;
 - storing the answers as spectator data;
 - processing the spectator data into results;
 - storing the results of the processing of the spectator data; and
 - broadcasting the results of the processing of the spectator data.

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2. The method of claim 1 further including the step of awarding prizes to at least one selected spectator who has answered the querying.

3. The method of claim 1 wherein the steps of querying and transmitting are achieved using wireless communications.

4. The method of claim 3 wherein the wireless communications are selected from the group consisting of radio transmissions, microwave transmissions, broadband wireline data transmissions, and satellite transmissions.

5. The method of claim 1 wherein the step of broadcasting the results is achieved using a large screen display.

6. The method of claim 1 wherein the step of broadcasting the results is achieved using the interactive device.

7. The method of claim 1 wherein the step of broadcasting the results includes the wireless transmission of data from the central processor to the interactive device for visual display thereon.

8. A hand held device for interactive audience participation at a live spectator event comprising:

- a housing including an electronic display opening;
- a local microprocessor being mounted within the housing;
- an audio receiving circuit for receiving an audio signal at a predetermined frequency;
- an audio output means, the audio output means being in electrical communication with the audio receiving circuit;
- a user interface configured to be employed by a spectator at the live spectator event and comprising a plurality of keys in electrical communication with the microprocessor for manually entering data to the local microprocessor;
- transceiver means in electrical communication with the local microprocessor for transmitting and receiving data to and from a central processor, and
- an electronic display in electrical communication with the local microprocessor, the electronic display being mounted within the housing and being visible through the electronic display opening in the housing, and the electronic display being adapted to display data from the microprocessor.

9. The hand held device of claim 8 further including means for presenting a promotional message.

10. The hand held device of claim 8 wherein the device utilizes wireless communications for transmitting and receiving data from the central processor.

11. The hand held device of claim 10 wherein the wireless communications are selected from the group consisting of radio transmissions, microwave transmissions, broadband wireline data transmissions, and satellite transmissions.

12. The hand held device of claim 8 wherein the audio signal is an RF signal.

13. The hand held device of claim 8 wherein the audio signal is a VHF signal.

* * * * *

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 6,434,398 B1
DATED : August 13, 2002
INVENTOR(S) : Inselberg et al.

Page 1 of 1

It is certified that error appears in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

Column 6,

Lines 9-10 and 50, please delete "wireline" and insert -- wireless --.

Signed and Sealed this

Eleventh Day of February, 2003

A handwritten signature in black ink, appearing to read "James E. Rogan", with a long horizontal flourish extending from the bottom of the signature.

JAMES E. ROGAN
Director of the United States Patent and Trademark Office

EXHIBIT 9

US006650903B2

(12) **United States Patent**
Inselberg(10) **Patent No.:** **US 6,650,903 B2**
(45) **Date of Patent:** ***Nov. 18, 2003**(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**(76) Inventor: **Eric Inselberg**, 1512 Gates Ct., Morris
Plains, NJ (US) 07950(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 55 days.This patent is subject to a terminal dis-
claimer.

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5,713,795 A	2/1998	Kohorn	
5,724,357 A	3/1998	Derks	
5,726,701 A	3/1998	Needham	
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5,916,024 A *	6/1999	Von Kohorn	463/40
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6,193,610 B1 *	2/2001	Junkin	463/40

(21) Appl. No.: **09/854,267**(22) Filed: **May 11, 2001**(65) **Prior Publication Data**

US 2002/0029381 A1 Mar. 7, 2002

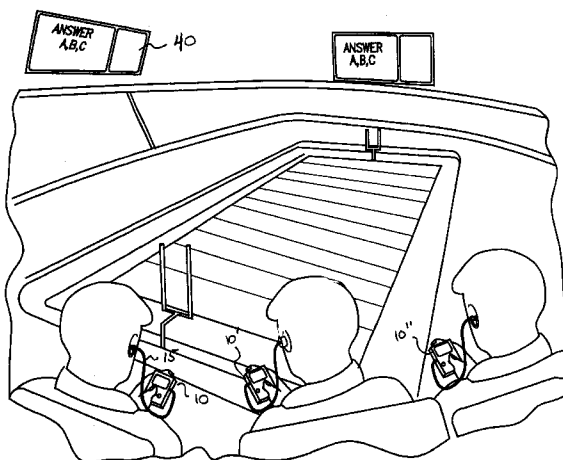
Related U.S. Application Data(63) Continuation of application No. 09/656,096, filed on Sep. 6,
2000.(51) **Int. Cl.⁷** **A04Q 7/20**(52) **U.S. Cl.** **455/517; 455/575; 463/40;**
463/39(58) **Field of Search** 455/517, 575,
455/550, 414, 416, 3.01, 3.03, 3.05, 3.06;
463/40-42, 36-39, 9, 37, 4; 725/24, 32,
86, 74; 434/322, 350, 362, 323; 273/460;
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Inc.*Primary Examiner*—Dwayne Bost*Assistant Examiner*—Jean A Gelin(74) *Attorney, Agent, or Firm*—Ernest D. Buff &
Associates, LLC; Ernest D. Buff; Gordon E. Fish(57) **ABSTRACT**

A method provides interactive audience participation at live spectator events. The method includes providing each spectator with an interactive device that presents a promotional message and includes a user interface, broadcasting audio programming to the spectator through the interactive device, querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device, transmitting the answers to a central processor, storing the answers as spectator data, processing the spectator data into results, storing the results of the processing of the spectator data and broadcasting the results of the processing of the spectator data.

3 Claims, 2 Drawing Sheets

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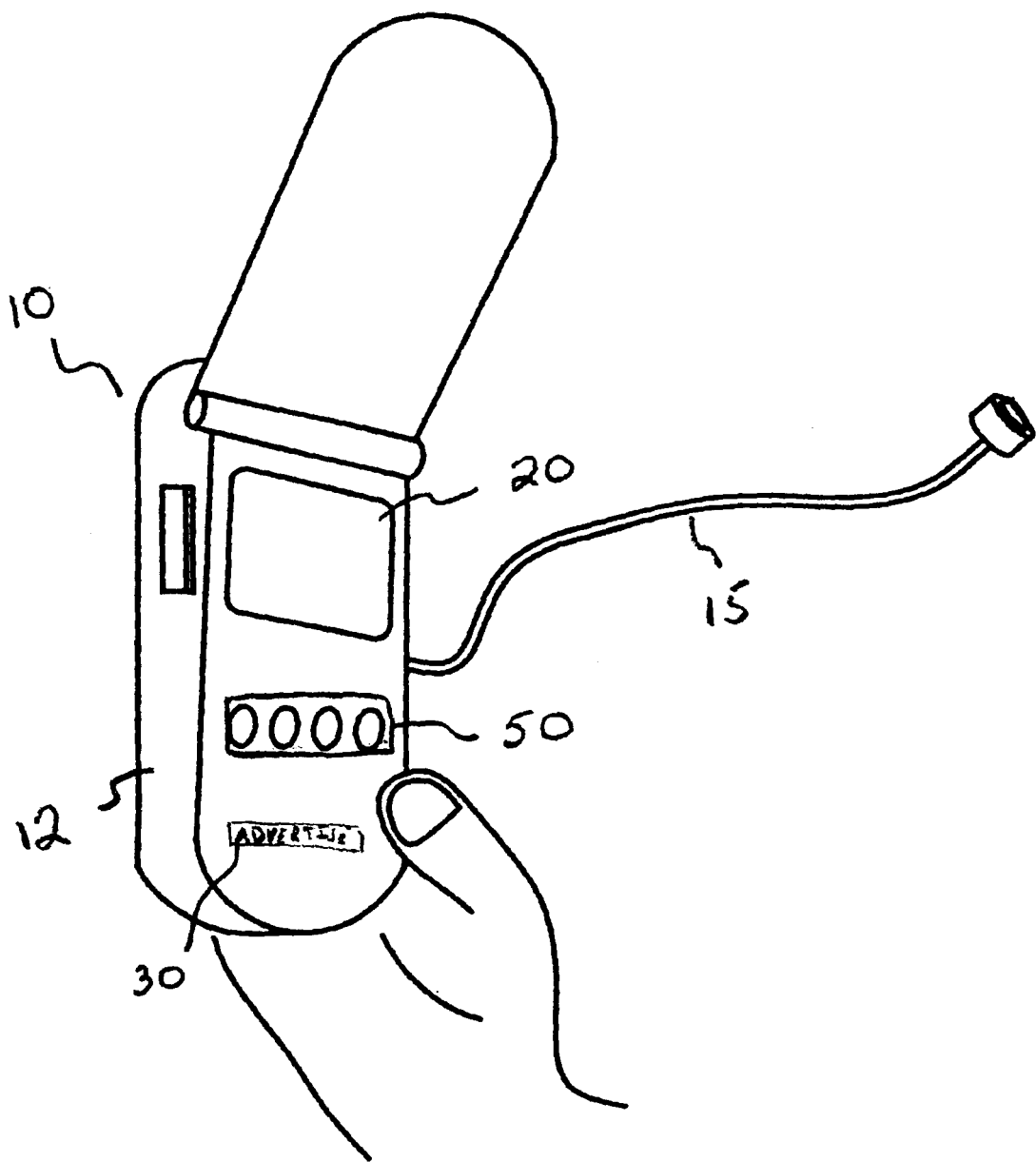


FIG. 1

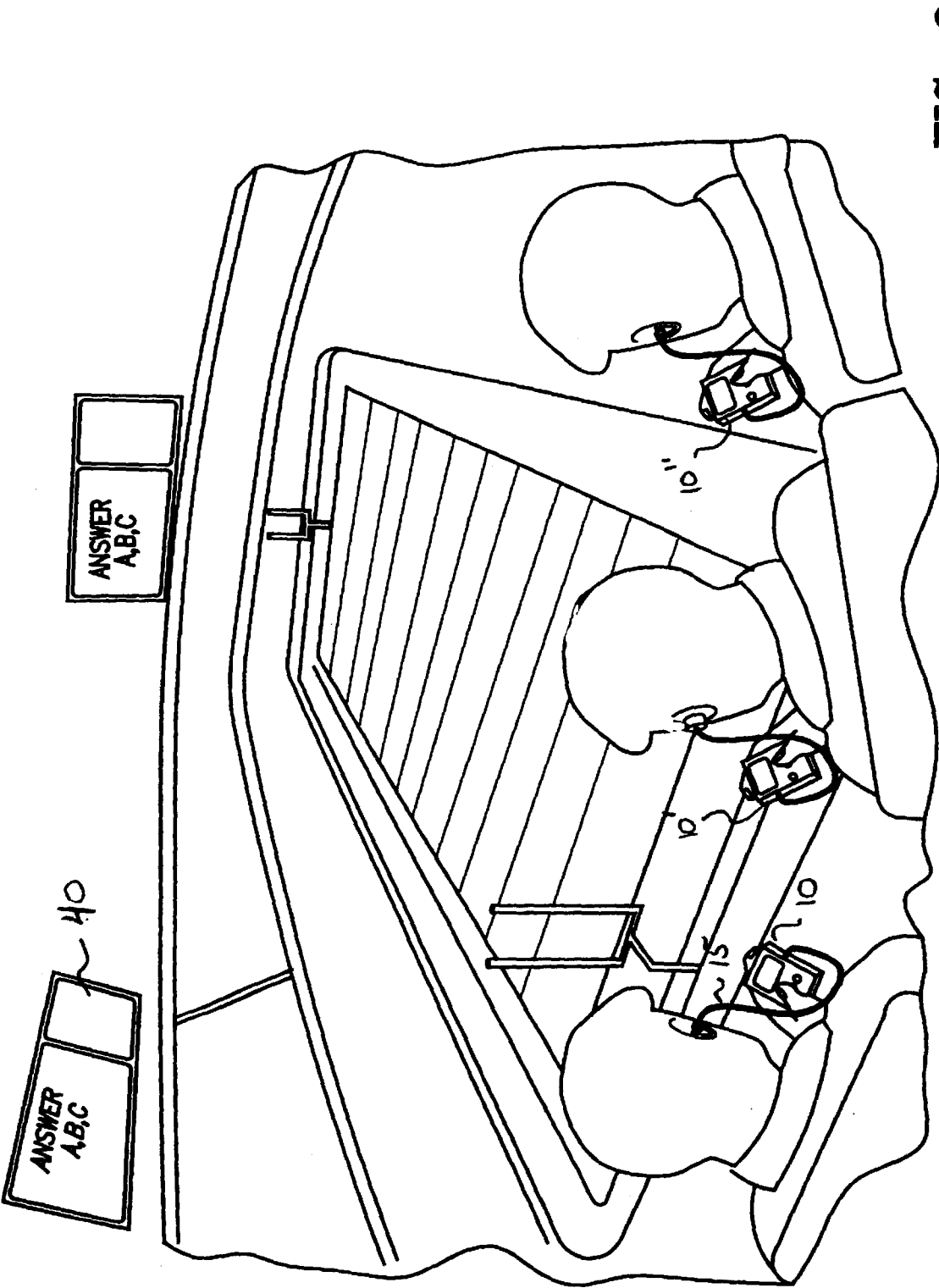


FIG. 2

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**METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**

RELATED U.S. APPLICATION DATA

This application is a continuation of applicant's U.S. patent application Ser. No. 09/656,096, filed Sep. 6, 2000.

FIELD OF THE INVENTION

The present invention relates to a method for interactive audience participation at a live spectator event. The invention also relates to an apparatus that is used in connection with such method.

BACKGROUND OF THE INVENTION

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live spectator events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON®. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live spectator events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a sports team. Accordingly, in order to continue attracting live audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and expressing one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally,

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fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, sometimes the seat location of the attendee fails to offer an unobstructed view. On other occasions a technical ruling may be made by a game official that is not fully explained to those in attendance but is fully analyzed by television and/or radio announcers.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of audience members at live spectator events by more fully involving the audience. In a preferred embodiment of the invention, the method of enhancing audience participation comprises communicating information to fans at a sporting event using an interactive device that allows fans to respond to displayed messages. Individual fan feedback is stored, processed (e.g., tabulated) and displayed back to the individual fan or the audience as a whole. The interactive device is preferably a wireless, hand held device, which includes an audio component to allow the user to listen to play-by-play and expert commentary during the live event. The audio component may also provide spectators with other desirable information such as traffic and weather reports. Since the device is easily transported, the fan can carry it on trips to the concession stands or to the restrooms. Further, the method presents promotional messages of sponsors and advertisers to each user of the interactive device. The promotional message may be permanently affixed to the device and/or transmitted to each device via open band lines. In a more specific method, the location of individual fans is identified by means of a transceiver located within the interactive device.

The method can be used to conduct contests wherein a fan is asked to predict the next event or events to take place (e.g. the outcome of the next at bat in a baseball game or the next play or plays to be called in a football game on a real time basis, all star balloting, pitching changes, etc.). Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the fan selects from a list of promptings and/or possible answers. A fan who correctly predicts a predetermined number of outcomes may be awarded an electronic coupon that can be redeemed for concessions and/or other prizes. Alternatively, the prize could be delivered to the fan based on the location of the fan's interactive device by means of communication with the transceiver located therein.

One advantage of the invention is that promotional messages and advertisements receive a higher degree of attention from fans, because the fans are more interested in the interactive content than in passively viewing or listening to broadcast messages.

Another advantage of the invention is that it is possible to receive instantaneous and correlated feedback from a large

number of fans, which is valuable information for, by way of example, sponsors, teams and leagues.

A further advantage of the invention is that fans value the expert commentary, freedom of movement and the interactivity afforded by the method, increasing their enjoyment and the perceived value of attending a live sporting event.

Other objects, features and advantages of the invention will be readily apparent from the following detailed description of a preferred embodiment thereof taken in conjunction with the drawings.

BRIEF DESCRIPTION OF THE FIGURES

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of hand held device used in connection with the interactive audience participation system of the present invention.

FIG. 2 is a schematic diagram of audience members at a spectator event utilizing the interactive audience participation system of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is shown in FIG. 1a hand held, interactive device 10 adapted for use in connection with the interactive audience participation system of the present invention.

The device is preferably provided to audience members at a live spectator event as shown in FIG. 2. The device is adapted to provide information to the user. In a preferred embodiment the device 10 includes a housing 12 with an electronic display opening. The device 10 preferably includes a multiband radio incorporated therein with an audio receiving circuit and an audio output means (not shown). The audio output means is in electrical communication with the audio receiving circuit in a manner known in the art. The radio is adapted to receive AM, FM and/or VHF signals from a number of predetermined frequencies.

An ear piece 15 is included to allow the user to listen to the radio associated with the device without annoying neighboring fans. It is noted that other listening means could be employed such as ear phones and the like.

An electronic display (visual display) 20 is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display is in electrical communication with a local microprocessor mounted within the housing. A transceiver in electrical communication with the local microprocessor allows for the transmission and receipt of data from a central processor (not shown) in a manner known in the art. The electronic display is adapted to display data received from the local microprocessor. For example, the visual display is adapted to display messages that ask the audience member to answer a question or provide an opinion. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display.

The device 10 preferably presents promotional messages from sponsors and/or advertisers, essentially underwriting the cost of a user interface device. Such messages can be in the form of indicia 30 located (e.g., physically imprinted) on

the device. Additionally, the messages can be visually displayed on the visual display 20 of the device or can be aurally communicated through the same. The messages can be in the form of pre-programmed visual messages or recordings or can be transmitted live during the spectator event via open band lines. The device is preferably provided to each audience member as part of the price of admission or, alternatively, as an optional item purchased by the audience member, and subsidized by the promotional messages.

In one embodiment, a large screen display 30, as depicted in FIG. 2, remotely located from the fan (e.g., a JUMBOTRON® display) is used for querying users of the interactive device. A user interface 50 on the device 10 allows an audience member to enter a response to queries. Examples of simple user interfaces are a keypad, selection buttons, touch screen, rotatable dial or voice recognition, but any other user interface could be incorporated within the invention. In an alternate embodiment, the user interface device is adapted to interact with other fans by allowing for the broadcasting of messages to all audience members or, alternatively, from one individual audience member to another. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

The responses of the audience members are sent to a central processor (not shown) that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device 10 or a large screen display 40 remotely located from the fan. FIGS. 1 and 2. The processed information could be a compilation of the number of similar responses or as a percentage of total responses or graphically in a bar chart, pie chart or some other graphical, numerical or combined graphical and numerical representation of the data.

One representative embodiment of the present invention is a method of enhancing the enjoyment of spectators at live entertainment venues.

In the first step of the method, spectators are provided with an interactive device 10, 10' and 10". FIG. 2. The interactive device may be any device which permits broadcast of audio or video or both audio and video and provides the spectator with a user interface for sending replies to queries. The interactive device is adapted to present promotional messages either by placing the same on the device or by visually or aurally transmitting messages through the same.

Optionally, the device could be used to send messages to another fan, group of fans or all fans. This feature could be enabled in a manner similar to email by having a unique address programmed in each device. Optionally, the users could be queried to input a section and seat number. Inputting a seat number has the additional benefit of allowing delivery of awards, incentives and prizes directly to the spectator's seat. Another way to deliver prizes to spectators would be completely electronic. An award could be sent electronically to the unique address programmed in the interactive device, which could then be redeemed at either a central location or at one of the concession stands. This could be done without entering a seat number.

Another step involves broadcasting audible programming to spectators, using the interactive device. This is accomplished by incorporating an audio receiving circuit within the device which is adapted to receive RF and/or VHF signals at predetermined frequencies.

Querying of spectators, wherein answers may be entered by spectators using their interactive devices, is yet another step of the method.

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Transmitting the answers from the spectators to a receiver or receivers is the next step in the method followed by receiving the answers, either at a central processing station or at distributed processing stations.

Storing the answers, at least temporarily, as spectator data, and processing the spectator data are additional steps in the method. This is followed by storing the results of the processing of the spectator data, at least temporarily.

Displaying the results of the processing of the spectator data is a step that generally follows the processing of the spectator data. This provides feedback to the spectators, showing them how their answers compared to other spectators. The steps of querying, transmitting, receiving, storing and displaying may all be accomplished via technology known in the art. Additionally, the steps of querying and transmitting are preferably achieved using wireless communications known in the art. The wireless communications are preferably selected from the group consisting of radio transmissions, microwave transmissions, broadband wire-line data transmissions, and satellite transmissions.

The offering of prizes to a selected spectator or spectators who have responded to the querying, participated in the interactive games or answered correctly quiz questions may be utilized to enhance the enjoyment of spectators.

Another optional embodiment of the method allows for wireless transmitting of the answers and/or responses to the querying.

Ultra-wide band transmission is a promising technology for the broadcasting of messages and transmission of spectators' responses. It has the advantage of multiplexing over a single frequency.

It is contemplated that the step of displaying the results may be achieved by using a stadium large screen display. Alternatively, the step of displaying the results may be achieved using a stadium monitor system or using a display incorporated in the interactive device or such information may be broadcast as audibly or both audibly and visibly.

The present invention may be embodied in other forms without departing from the spirit or essential attributes thereof and accordingly reference should be made to the claims rather than to the foregoing specification as indicating the scope thereof.

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What is claimed is:

1. A method for interactive audience participation at a live event attended by a plurality of spectators, comprising the steps of:

- providing spectators at the live event with an interactive device, wherein the interactive device presents a promotional message and wherein the interactive device includes a user interface;
 - querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device;
 - transmitting the answers to a central processor; storing the answers as spectator data; processing the spectator data into results;
 - storing the results of the processing of the spectator data; and
 - broadcasting the results of the processing of the spectator data,
- wherein the promotional message is from at least one of a sponsor and an advertiser, and said method further comprises the step of underwriting the cost of the user interface device with the promotional message.

2. The method of claim 1, further comprising the step of broadcasting audio programming to the spectators through the interactive device.

3. A hand held device for interactive audience participation at a live spectator event comprising:

- a housing including an electronic display opening;
- a local microprocessor being mounted within the housing;
- a user interface configured to be employed by a spectator at the live spectator event for manually entering data to the local microprocessor, the user interface being in electrical communication with the local microprocessor and comprising a plurality of keys in electrical communication with the local microprocessor;
- an audio receiving circuit for receiving an audio signal at a predetermined frequency; and
- an audio output means, the audio output means being in electrical communication with the audio receiving circuit.

* * * * *

EXHIBIT 10



US006760595B2

(12) **United States Patent**
Inselberg

(10) **Patent No.:** **US 6,760,595 B2**
(45) **Date of Patent:** ***Jul. 6, 2004**

(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**

(76) Inventor: **Eric Inselberg**, P.O. Box 833, Short Hills, NJ (US) 07078

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **10/378,582**

(22) Filed: **Mar. 5, 2003**

(65) **Prior Publication Data**

US 2003/0144017 A1 Jul. 31, 2003

Related U.S. Application Data

(63) Continuation-in-part of application No. 09/854,267, filed on May 11, 2001, which is a continuation of application No. 09/656,096, filed on Sep. 6, 2000, now Pat. No. 6,434,398.

(51) **Int. Cl.⁷** **H04Q 7/20**

(52) **U.S. Cl.** **455/517**; 455/575.6; 463/36; 463/39; 463/40

(58) **Field of Search** 455/517, 550, 455/414, 575; 463/36-42; 725/9

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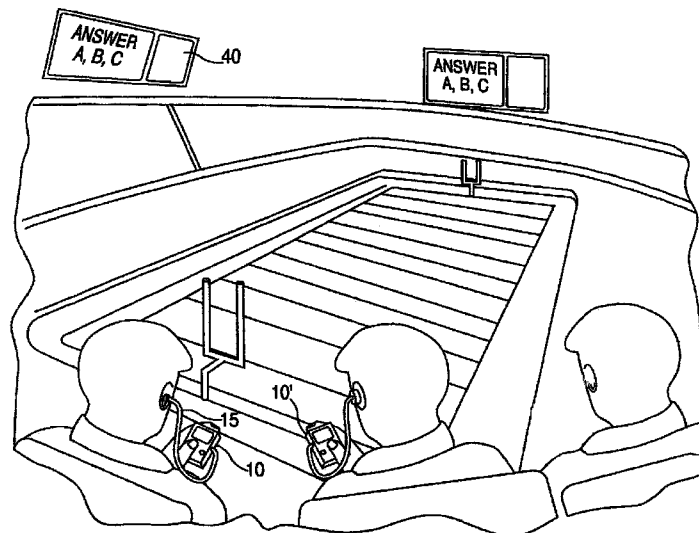
Primary Examiner—Jean Gelin

(74) *Attorney, Agent, or Firm*—Ernest D. Buff & Associates, LLC; Ernest D. Buff; Gordon E. Fish

(57) **ABSTRACT**

A method for providing interactive audience participation at live spectator events enhances enjoyment for a plurality of spectators. Participating spectators employ wireless interactive devices that present a promotional message and include user input and output interfaces. Spectators are queried, and enter answers via the user input interface. The answers are transmitted to a central processor, stored as spectator data, and processed into results. A visual display or the user output interface announces the results to the spectators.

52 Claims, 3 Drawing Sheets



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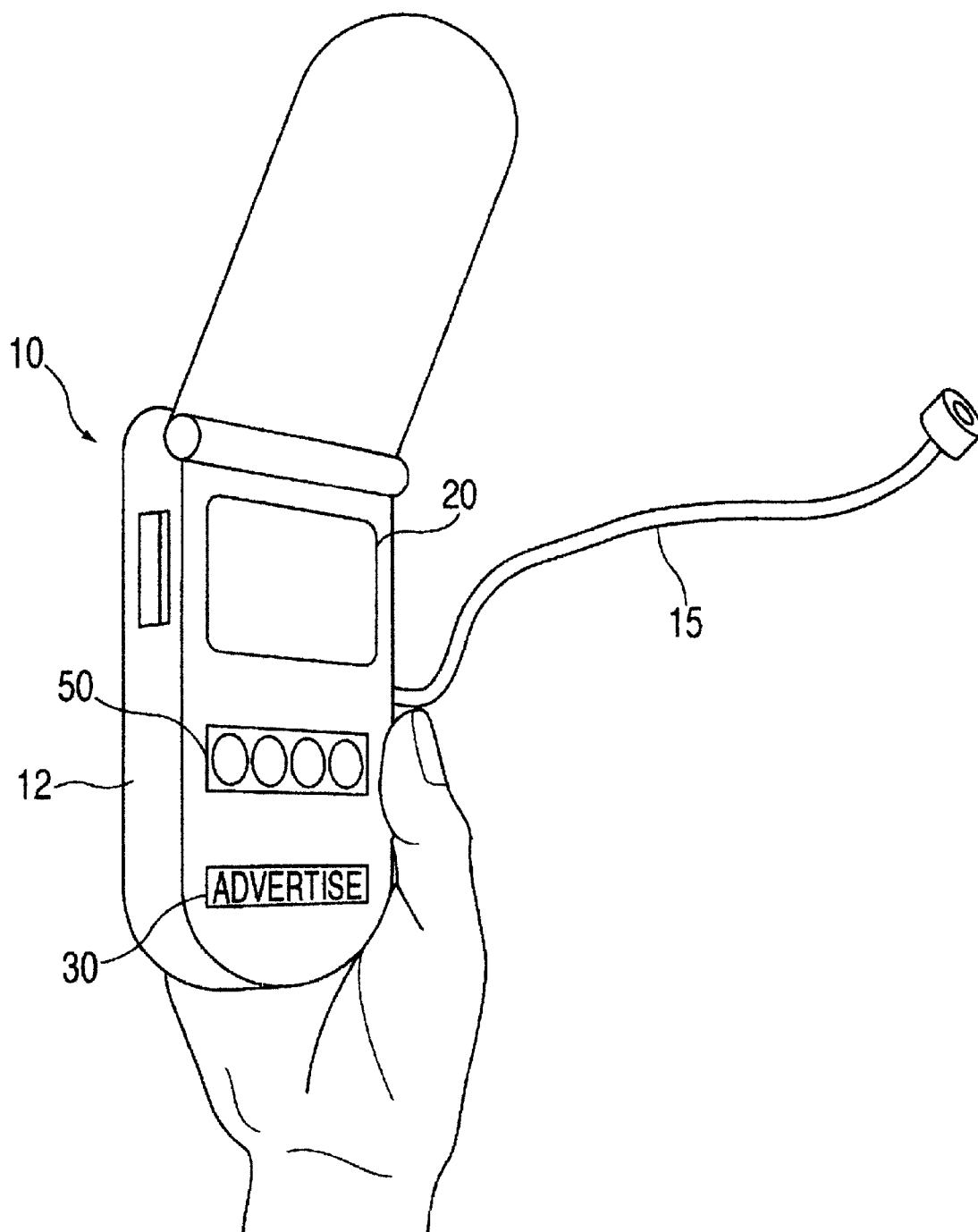
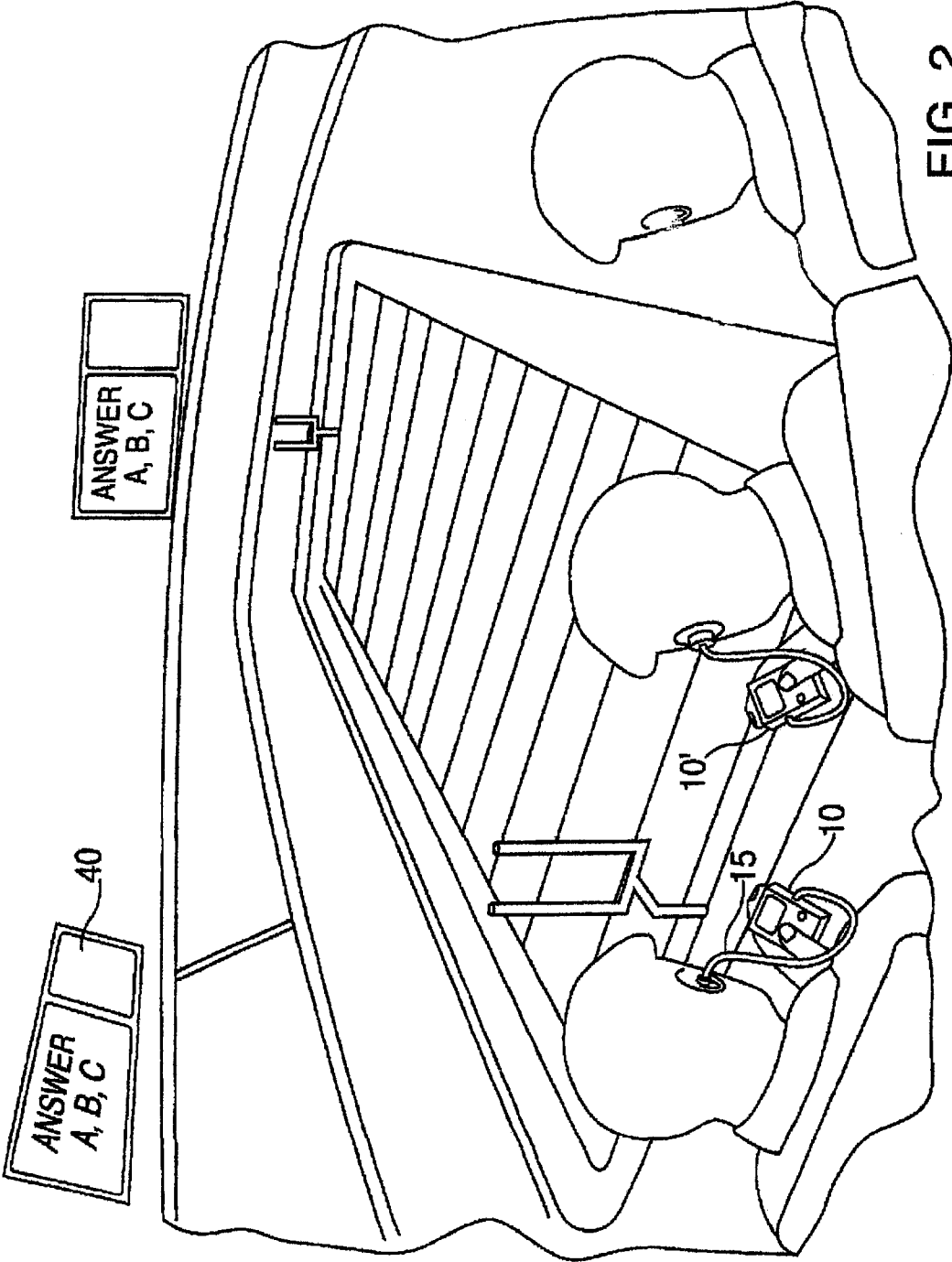


FIG. 1

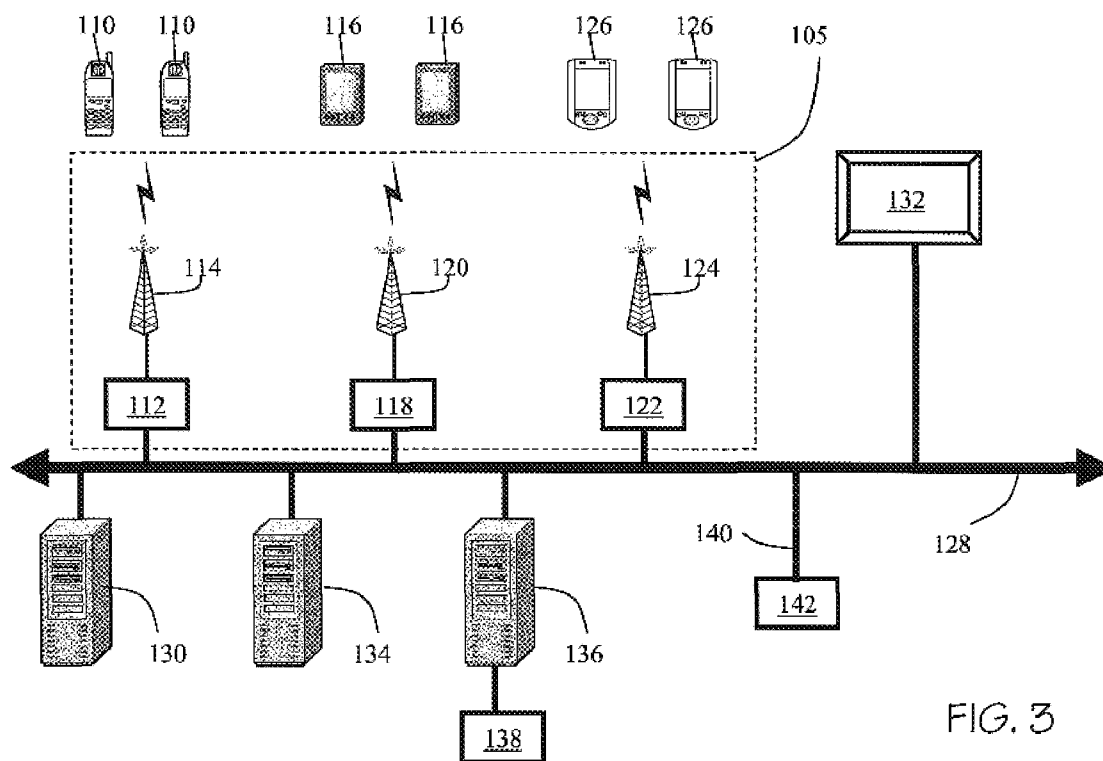


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METHOD AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE SPECTATOR EVENT

RELATED U.S. APPLICATION DATA

This application is a continuation-in-part of co-pending U.S. patent application Ser. No. 09/854,267, filed May 11, 2001 which, in turn, is a continuation of U.S. patent application Ser. No. 09/656,096, filed Sep. 6, 2000, now U.S. Pat. No. 6,434,398, issued Aug. 13, 2002.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a system and method for interactive audience participation at a live spectator event; and more particularly, to a system and method by which spectators answer queries using wireless interactive devices, the answers are correlated and results are announced, thereby enhancing the spectators' experience and enjoyment.

2. Description of the Prior Art

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live spectator events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON®. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live spectator events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a sports team. Accordingly, in order to continue attracting live audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members ordinarily spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and express-

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ing one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally, fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often-heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, sometimes the seat location of the attendee fails to offer an unobstructed view. On other occasions a technical ruling may be made by a game official that is not fully explained to those in attendance but is fully analyzed by television and/or radio announcers.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

Accordingly, there remains a need for a method and system that provides interaction that heightens the enjoyment experienced by participants at a live spectator event.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of audience members at live spectator events by more fully involving the audience. In a preferred embodiment of the invention, there is provided a method for enhancing interactive participation by a plurality of spectators attending a live spectator event. The method comprises communicating information and queries to participants at the event, such as a sporting event, using a wireless interactive device in conjunction with a wireless communications system. The device permits fans to respond to displayed messages or to participate in contests of various sorts. Individual fan feedback is received and transferred to a central processor for storage and processing (e.g., tabulation or statistical analysis). Thereafter, the results are announced to the individual fan or to the audience as a whole. The interactive device is preferably a wireless, hand held device, having user input and output interfaces. The user input interface preferably comprises at least one member selected from the group consisting of a keypad, selection buttons, a touch screen, a rotatable dial, a pointing device (e.g. a mouse or trackball), and a voice recognition system. The user output interface preferably comprises a visible display for alphanumeric, textual, or graphic images and audio output means such as a speaker or earphone. Preferably the device is a cellular telephone, two-way pager, or wireless personal digital assistant (PDA) or pocket PC. It is further preferred that the device be Internet enabled, and that the wireless communication system employ the Internet in the communication of data. Alternatively, the interactive device may be a special-purpose device incorporating at least features needed for the practice of the present method.

The device is easily transported, permitting the fan to carry it on trips to the concession stands or to the restrooms. Further, the method presents promotional messages of sponsors and advertisers to each user of the interactive device.

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The promotional message may be permanently affixed to the device and/or transmitted to each device via open band lines.

The method can be used to conduct contests wherein a fan is asked to predict the next event or events to take place (e.g. the outcome of the next at bat in a baseball game or the next play or plays to be called in a football game on a real time basis, all star balloting, pitching changes, etc.). Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the fan selects from a list of promptings and/or possible answers. A fan who correctly predicts a predetermined number of outcomes may be awarded an electronic coupon that can be redeemed for concessions and/or other prizes. Alternatively, the prize could be delivered to the fan based on the location of the fan's interactive device by means of communication with the transceiver located therein.

The degree of attention and receptivity accorded to promotional messages and advertisements received by patrons using an interactive device at a live spectator event in accordance with the present method is beneficially increased. The combination of the atmosphere of the live venue with the interactive content and the stimulus of active participation frequently heightens the degree of interest of spectators at a live event for proffered advertisements over that accorded by those who passively view or hear broadcast coverage at home or another remote location. The spontaneity and excitement engendered at the actual event enhance the likelihood that a fan will perceive advertised items favorably. A fan at the live event is also more likely to respond positively by purchasing food and beverage items, souvenirs, team promotional merchandise, and the like.

In a further aspect the method makes it possible to receive instantaneous and correlated feedback from a large number of motivated patrons. Their comments, directed both to advertised products and services and to the entertainment itself, are valuable information for sponsors, teams, leagues, and providers of goods and services, for example.

In yet another aspect of the invention, play-by-play and expert commentary are wirelessly transmitted to the interactive device during the live event for output to the user. The transmitted content optionally includes other desirable informational items such as news, traffic, weather conditions and forecasts, news and scores of other sporting events. The availability of such material increases fans' enjoyment and the perceived value of attending a live sporting event.

The method and system of the invention are advantageously practiced at a live spectator event, by which is meant an organized event wherein a large number of patrons are gathered to witness and enjoy in real time any form of entertainment, including an event such as an artistic or athletic performance or an important business, civic or religious event. Such events may be conducted at permanent facilities, such as indoor and outdoor stadiums for sporting events and other public gatherings; amphitheaters; auditoriums; concert halls and theaters; race tracks for animals or vehicles; theme parks; convention centers; casinos; exhibition halls; or other similar venues associated with organized gatherings of large numbers of people. Live spectator events can also be held at facilities that are temporary and not ordinarily appointed for large gatherings, such as golf courses or temporary urban road racing courses. It is contemplated that the present method may be carried out at events of the aforementioned or similar types.

In another aspect, the method and system of the invention are advantageously practiced at live events which entail simultaneously-occurring activities in different locations

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within an overall venue, such as golf and tennis tournaments, the Olympic Games, and the like. The wireless interactive device of the invention allows spectators viewing one of the activities to remain apprised of the progress of other activities.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood and further advantages will become apparent when reference is had to the following detailed description of the preferred embodiments of the invention and the accompanying drawings, wherein like reference numeral denote similar elements throughout the several views and in which:

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of a hand held device used in connection with the interactive audience participation system of the present invention;

FIG. 2 is a schematic diagram of audience members at a spectator event utilizing the interactive audience participation system of the present invention; and

FIG. 3 is a schematic diagram of a system of the invention for enhancing spectator enjoyment and interaction.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to FIG. 1, there is shown one form of a hand held, interactive device **10** adapted for use in connection with the interactive audience participation system of the present invention. In one embodiment, device **10** is employed by audience members at a live event as shown in FIG. 2. The device is adapted to communicate bi-directionally with a wireless communications system operative at a live spectator event, to provide information to a user, and to accept entry of information through a user input interface for transmission to the wireless communications system. In a preferred embodiment the device **10** includes a housing **12** with an electronic display opening. An electronic display (visual display) **20** providing one form of user output interface is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display is in electrical communication with a local microprocessor mounted within the housing. A transceiver in electrical communication with the local microprocessor allows for the transmission and receipt of data from a wireless communications system connected to a central processor (not shown) in a manner known in the art. The electronic display is adapted to display data received from the local microprocessor. For example, the visual display is adapted to display messages that ask the audience member to answer a question or provide an opinion. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display. Keypad **50** accepts user input for transmission to the central processor.

In another aspect of the invention, the interactive device is used by spectators to receive audible or video programming, which may be transmitted in the commercial AM or FM broadcast band or at any of a number of predetermined frequencies in the RF, VHF, UHF, or microwave frequency bands. Programming may also be transmitted optically, such as by modulation of an infrared emitting

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source located in the venue. Optionally, the device also comprises means for receiving and displaying video signals such as from ordinary broadcast television stations. Transmission of such program content may be done via conventional commercial broadcast stations or with low power transmitters intended only to cover the immediate venue. In a preferred embodiment device 10 incorporates circuitry to receive the aforementioned audio or video program content. The circuitry is adapted to receive the content and present it to the user. An earpiece 15 is preferably included to allow the user to listen to the radio associated with the device without annoying neighboring fans. It is noted that other listening means could be employed such as earphones, speakers, or the like. In other embodiments the aforesaid audio or video programming may be transmitted via any computer network to which the interactive device is connected, such as by streaming audio or video transmitted via the Internet, in accordance with presently employed protocols or other suitable protocols.

It is contemplated that special purpose devices such as the aforementioned interactive device 10 are optionally be available to those patrons who do not carry a conventional wireless device such as a cellular telephone or PDA. These special devices would preferably be prepared for each event at one or more central locations, having battery charging and menu programming capability, and transported to kiosks near patron entry points in the venue. The kiosks would each be either sales locations or rental contract stations to secure deposit and payment terms (cash, credit/debit card, etc.), and patron seat location information for rental of the special devices to patrons prior to start of the event, and collection of the special devices after conclusion of the event. Optionally, such a device is provided to at least selected audience members as part of the price of admission or, alternatively, as an optional item rented or purchased by the audience member, and subsidized by the promotional messages.

In another aspect of the invention, wireless devices such as those routinely possessed and used by members of the public, are used for the aforementioned interactive communication. Preferably the wireless devices are selected from the group consisting of wireless personal digital assistants (PDA) and Pocket PC's; two-way pagers; and cellular telephones. Such devices normally incorporate input means such as keypads, selection buttons, and touch screens, and video and audio output means such as display screens, speakers, and earphones. The devices typically include circuitry, such as a local microprocessor, adapted to convert wireless input into forms presented by the output means and to accept user-entered input that is converted for wireless output in a manner known in the art. Many of these devices are also Internet-enabled, that is to say, able to send and receive textual or graphic data in protocols which are commonly associated with Internet technology and able to be processed suitably by routers, servers, and other ancillary equipment used in Internet communication. Additionally, such devices frequently have the capability of sending and receiving electronic mail messages which may be transmitted worldwide over the Internet. Suitable PDA's include wireless units sold under the PALM™ tradename by Palm Computing and under the BLACKBERRY™ tradename by Research In Motion. Wireless Pocket PC's sold, e.g. by Hewlett Packard, Compaq, and Dell are also suitable.

As there are many suitable alternatives on which to base an embodiment of the current invention which are known to those skilled in the art, the specific interactive device and wireless communications technology used, the specific mul-

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multiple access communication protocol used, and the specific client/server hardware interface and protocol are not important to the method of the invention so long as they support the required functions. What is important is the method of this invention by which the customer is provided better service.

A number of currently used communications protocols suitably provide connectivity between these devices and a wireless communications system. One presently preferred protocol is provided by the commercial cellular telephone network. Many telephones, currently operative with these networks incorporate provisions for sending and receiving textual messages and graphic images and for exchanging electronic mail through the Internet. For example, suitable techniques which may be used in the implementation of the present system are practiced in connection with cellular telephone systems, including such currently preferred methods as frequency division multiple access (FDMA), time division multiple access (TDMA), code division multiple access (CDMA), and global system for mobile communications (GSM) protocols. Current cellular telephone systems also provide various forms of instant messaging capability also useful in transmitting and receiving the queries, advertisements, and the like used in the present method.

Another preferred communications protocol is specified by IEEE Standard No. 802.11, published by the Institute of Electrical and Electronics Engineers, and incorporated herein in the entirety by reference thereto. IEEE 802.11 specifies a local area network system for wirelessly connecting individual devices such as PDA's and Pocket PC's to a local server through which the devices may communicate wirelessly, e.g. through a local intranet or the global Internet. Other wireless protocols that may be used to establish connectivity are also known, such as the Bluetooth Standard, published by the Bluetooth SIG and available through the website www.bluetooth.com, and incorporated herein in the entirety by reference thereto.

The bilateral wireless communications used in the practice of the present method and system are preferably implemented using at least one transmission form selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions. Ultra-wide band and spread-spectrum transmission is an especially promising technology for the broadcasting of messages and transmission of spectators' responses. The multiplexing and frequency shifting inherently available in such technologies improve immunity to noise and interference and the security of data in transmission. For example, suitable techniques which may be used in the implementation of the present system are practiced in connection with cellular telephone systems, including such currently preferred methods as frequency division multiple access (FDMA), time division multiple access (TDMA), code division multiple access (CDMA), and global system for mobile communications (GSM) protocols.

It will be understood by one skilled in the relevant art that different transmission modes and frequencies may be used by the wireless communications system for the transmissions to and from the wireless interactive device and that multiple transmission modes and frequencies may be used to accommodate interactive devices of different types simultaneously operated in the present system.

One representative embodiment of the present invention is a method of enabling interactive participation by a plurality of spectators at a live event employing a wireless

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interactive device. The interactive participation enhances the enjoyment of such spectators at a live event transpiring at any form of entertainment venue.

The number of spectators constituting the plurality of spectator participants can vary depending on factors such as the size and nature of the live event, the prevalence of user-supplied wireless interactive devices, the availability of devices for sale or rent on-location, and the characteristics of the venue. At events with a very large number of spectators, e.g. the 50,000 to 100,000 or more fans that attend many major collegiate and professional sports games, a very small fraction of the participants suffices to provide statistically significant information characteristic of the entire crowd if the individuals are representative of the whole. For example, public opinion polls often rely on a sample as small as 500–1000 respondents to infer the views of the entire population of the United States. Accordingly, the term “plurality of spectators” as used herein, means a number of spectator participants varying from about 50 to as many as 100,000 or more. Preferably the number of spectator participants is at least about 1 percent of those persons present at the live event. Most preferably, the plurality of spectators ranges from about 25 percent to substantially all the spectator participants at the live event.

In a step of the method, there is provided a wireless communication system adapted to transmit and receive messages with the wireless interactive devices used by the spectators. The wireless system is used to disseminate promotional messages to the spectators through the user output interface of the wireless device.

The method also comprises querying the spectators to respond with answers entered through the user input interface of the wireless device and transmitted therefrom using the wireless communication system. The answers received are transferred to a central processor for processing into results. It will be recognized that the accumulation of results may be done in the central processor or in one or more distributed receiving servers networked in data communication with the central processor by techniques well known in the computer art, such as by use of a local area network communicating over wire, wireless, or fiber optic communication links. Preferably, a stored computer program operative in either form of server accumulates and stores the incoming answers, at least temporarily, as spectator data. The results of processing the spectator data are also preferably stored, at least temporarily. At a suitable time, such as after the expiration of an announced deadline for participants to enter and transmit their responses to queries, the processed results are then announced to the spectators. Optionally prizes are awarded to participants who have entered an answer.

Queries can be promulgated to the spectators in many ways, including notice given by public address system announcements, visual displays on scoreboards, video monitors, or the like visible to the spectators, or by messages such as aural, textual, or graphic messages transmitted to the interactive units and then output to the spectator using the user output interface. Optionally the queries are included in content provided by Internet portal sites to which the fans are connected. Questions may also be included in audio play-by-play descriptions or commentary broadcast to the interactive units. After assimilation and processing of spectator responses, announcement of results may be given to the spectators by similar means.

Displaying the results of the processing of the spectator data is a step that generally follows the processing of the

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spectator data. This provides feedback to the spectators, for example showing them how their answers compared to other spectators.

In one embodiment, a display visible to the spectators, such as large scoreboard or screen display **40**, as depicted in FIG. 2 and remotely located from the fan (e.g., a JUMBOTRON® display), is used both for promulgating queries to participants and for announcing results. Alternatively, the display visible to the spectators comprises video monitors, preferably dispersed throughout the venue. The questions and results are optionally displayed on these monitors. A user input interface, such as keypad **50** on device **10**, allows an audience member to enter a response to queries. Examples of simple user input interfaces include a keypad, selection buttons, a touch screen, a rotatable dial, a pointing device such as a mouse or trackball, and a voice recognition system, but any other user interface could be incorporated within the invention. A voice recognition system advantageously facilitates the use of the present system by visually impaired persons. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

In FIG. 2 there is depicted the practice of an embodiment of the invention. At least some of the spectators at an athletic event occurring in a large, outdoor stadium are provided with an interactive device **10** and **10'**. It will be understood that the interactive device may be either an item such as a cellular phone, or a wireless PDA or Pocket PC provided by the spectator. Optionally, suitable devices are made available at the spectator venue for purchase or rent or are given away without charge. The present inventor contemplates that only a portion of the spectators in attendance at an event may choose to participate, either by using a suitable interactive device they furnish or by obtaining a unit at the venue. In other embodiments of the invention up to substantially all of the patrons at a live event participate by using the present method. FIG. 2 further depicts the users entering answers to a query using keypads available on their respective interactive devices and the display of answers on a large display board **40**. In addition to displaying results of the audience querying or contest, the material displayed on board **40** or dispersed video monitors optionally also includes promotional messages or advertising. For example, a given contest question might be sponsored by a business entity in return for including advertising for the entity's products during the querying and announcing associated with that contest.

The offering of prizes to one or more selected spectators who have responded to the querying, participated in the interactive games, or answered correctly quiz questions may be utilized to enhance the enjoyment of spectators, to encourage further participation in the querying and contest aspects of the present method, and to promote the sale of goods and services. Such prizes include goods and services of any form or discounts toward the purchase thereof. Items may be delivered directly to a winning patron either at the live event location or another preselected location. Alternatively, coupons redeemable for items or services at no cost or at a reduced cost may be delivered to the winning patron in person; by mail or similar delivery service; or transmitted electronically as a message to the patron's wireless interactive device or as an entry in an account of the patron, such as a credit or debit card account, a wireless service provider account, or the like. In a preferred embodiment, credits or coupons are transmitted to the winning patron in conjunction with billings for such an account of the patron.

The types of questions appointed for audience response range widely. For example, at an athletic event such as a

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football game, the questions may relate to game strategy or to selection of a most valuable player. At a golf tournament, participants might be asked to indicate which club a player ought to select to accomplish a given shot. Concert goers might be asked to select a favorite song or artist from a number of choices presented. Other types of questions of more general nature and interest may also be used.

The responses of the audience members are sent to a central processor (not shown) having a computer program stored and operative therein that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device 10 or a large screen display 40 remotely located from the fan. FIGS. 1 and 2. The processed information could be a compilation or tabulation of similar responses, as either a number or a percentage of total responses, a graphical representation in a bar chart, pie chart or the like, or a combined graphical and numerical representation of the data. The processing further may include categorization of participants' responses according to demographic characteristics, which might include the age or gender of the participant or his/her preferred team loyalty.

The wireless device employed in the present method preferably presents promotional messages from sponsors and/or advertisers. Monetary compensation for the presentation of such advertising material is optionally used to defray or underwrite the costs associated with practice of the present invention. Messages can be in the form of indicia 30 located (e.g., physically imprinted) on devices loaned, rented, or sold to spectators. Additionally, the messages can be visually displayed on the visual display of the device or can be aurally communicated through the same. The messages can be in the form of preprogrammed visual messages or recordings, but preferably are transmitted by the wireless communication system and presented live during the spectator event via open band lines. Visual advertising is optionally presented either in discrete segments or is incorporated into the overall image being presented at a given time, such as a banner ad.

In a further aspect of the invention, the interactive device is used to advertise goods and services for sale and to accept orders for same from the spectators. Advantageously, the interactive querying and contest aspects of the present method provide an impetus for users also to give attention to advertising that urges the purchase of goods and services. For example, such advertisements may interspersed with questions and contests, enhancing the likelihood that a patron will be motivated to make a purchase. In an embodiment, advertisements promoting the items are stored in a transaction server or recording system in data communication with the wireless communication system. Advertisements are selectively or generally transmitted by the wireless system for output by the user output interface of each interactive device. The user then enters an order for items or services desired using the user input interface, such as the keypad of a cellular telephone or PDA. The order is transmitted to the wireless communication system and routed to an order fulfillment server system. A computer program stored and operative therein receives the orders and communicates them to a provider of goods and services for order fulfillment. Physical goods, such as food and beverage, promotional items, and souvenirs may be delivered to the patron's seat, made available for pickup at a predetermined location at the entertainment venue, or shipped to another appointed location. In some embodiments, the wireless interactive device incorporates circuitry, such as global positioning sensor technology,

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whereby the device may be localized sufficiently to allow the provider to determine a patron's physical location and thereby effect direct delivery of items to the patron. Services or intangible items, such as tickets to future events or coupons redeemable for other items or for reduced prices, may be provided by similar forms of delivery or communicated electronically using known techniques. Preferably, monetary consideration for purchased goods or services is provided by electronic transfer of funds between bank accounts or by charges billed to a user, such as to a user's conventional debit or credit card or wireless service provider account. Consummation of transactions using other forms of payment known for electronic processing may also be used and are to be considered within the scope of the method of the invention. In one embodiment, the present system is connected to an electronic financial network of a type known in the art. Transfer of funds from the network provides monetary consideration to the provider for the goods and services received by the ordering spectator.

In one embodiment, a menu of items available for purchase is transmitted upon the user's request to the interactive device. A hierarchical arrangement of a known sort including submenus may be used in situations wherein more items are available than can be accommodated within the confines of output displays of extant interactive devices. Preferably the items offered include at least food, drink, souvenir merchandise, and tickets for future events. In addition, other services are optionally offered, such as restaurant, lodging and transportation reservations, biographical and recording data for athletes, concert artists, and other performers, future schedules of events, and myriad other information. This information can be conveyed visually, audibly, or via a combination of both media forms. The offerings presented through the wireless interactive device may be complemented by messages simultaneously displayed on scoreboards or the like to enhance their ability to garner the audience's attention.

In order to place an order, a user navigates using the input interface through the menus to select one or more items for purchase. The user may further enter location or other identifying indicia, such as a unique seat number or other reference number by which correct delivery may be effected. A credit card, bank account number, prepaid account number, or other similar reference by which money is electronically credited to the vendor in payment for the items ordered is also entered. Alternatively, any mechanism for effecting electronic payment known in the relevant art is used. As is well understood by those skilled in the art, even the limited hardware display and processing capacity of present cellular telephones, PDA's, and pagers is sufficient to accommodate the aforementioned menu and ordering method. However, as time moves on, much higher text densities, graphics, and even color will likely become commonplace in such devices and allow ever-increasing functionality to be provided and used in the method of this invention. As hierarchical menu systems have become ubiquitous with the advent of automated teller machines and windowed graphical user interfaces on modern computer operating systems, the concept and the method of its use are familiar to many persons and will not be further described here.

The use of electronic ordering and payment facilitates sales made in accordance with the present method. Items can be ordered by patrons from their seats at any time and timely delivered, without the need to wait for the unpredictable arrival of a roving vendor who may not even be carrying the item desired. The confusion of having to communicate an

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order in the often-noisy environment of a sports stadium is eliminated, as is the inconvenience of passing money in payment and change, possibly across many patrons between the customer and the closest aisleway. In addition to use of common credit and debit cards as means of payment, corporate accounts and billing through third party accounts such as the customer's Internet service provider or cellular telephone service provider are readily effected in a transaction processed in accordance with the present method.

In still another aspect of the present method, demographic information or characteristics of the users of wireless interactive devices are gathered and used in various ways. Users may be asked to enter information, such as their age or gender. Alternatively, such information may already be extant and available in databases, such as records of cellular telephone customers. Such information may be used to select which of a plurality of advertisements are most appropriate and likely to be of interest to a given user. The individual addressability of devices such as cellular telephones and wireless PDA's permits individually selected commercials to be presented to particular individuals or groups. Demographic information may also be used to tailor questions and limit contest participation to selected users. For example, participation in all or part of a survey or competition may be offered only to a restricted group, such as preferred corporate customers, patrons in selected classes of seats, season ticket holders, or youths. In addition, customer survey information is considered more useful by advertisers if the answers are categorized by the demographics of the respondents. All of these functions are easily implemented in the practice of the present method.

FIG. 3 depicts one form of the system 100 of the invention. A wireless communications system 105 provides service to cellular telephones, wireless PDS's, and Pocket PC's. Wireless interactive devices used with the system are a plurality of cellular telephones 110 and served by cellular telephone provider 112 through signals transmitted and received at antenna 114. Wireless PDA's 116 are served by wireless PDA service provider 118 through signals transmitted and received at antenna 120. A wireless local area network 122 transmitting signals in accordance with IEEE Standard 802.11 from antenna 124 serves wireless Pocket PC's 126. Each of cellular telephone provider 112, wireless PDA service provider 118, and wireless local area network 122 communicates through the Internet 128. Promotional message server 130 selects promotional messages which are transmitted via the Internet to wireless communications system 105, and broadcast to interactive devices 110, 116, and 126. Promotional messages are also transmitted to stadium display 132. Central processor 134 provides queries displayed on display 132. Answers to such queries are entered on the user input interfaces of interactive devices 110, 116, and 126 and received by distributed receiving servers (not shown) maintained by each of cellular telephone provider 112, wireless PDA service provider 118, and wireless local area network 122. The distributed receiving servers accumulate the answers and transfer them by Internet to central processor 134 for processing into results, which are then communicated and displayed by display 132. Order processing server 136 receives orders for goods and services entered by spectators using their wireless interactive devices and communicates those orders to one or more providers 138 of goods and services, such as food/beverage vendors. Connection 140 to electronic financial network 142 enables the electronic transmission to providers 138 of monetary consideration for the goods and services they furnish. It will be understood by those skilled in the relevant art that the

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functions of the plural servers alternatively may be shared among a smaller number of servers or may be accomplished by central processor 134. The plural servers also may be in data communications via the Internet or a local network implemented using connections by wire, wireless, or optical data transmission, in any way conventional in the art.

In a further embodiment, the present invention is advantageously practiced in connection with the many sporting events that entail simultaneous activities in different locations comprised in a venue. For example, a golf tournament ordinarily comprises staged play, wherein the competing golfers begin play at individually appointed times over an extended period, so that play is occurring simultaneously at each hole through most of the duration of the event. Important tennis tournaments such as the U.S. Open or Wimbledon are ordinarily played in a venue comprising plural courts on which matches occur simultaneously. During the Winter and Summer Olympics, competition occurs simultaneously in many sports, sometimes in widely scattered locations. In each of these situations, the interactivity afforded by the present method provides a marked enhancement of the fan experience under such circumstances.

In still another aspect, the present system could be used to send messages to another fan, group of fans or all fans. This feature could be enabled in a manner similar to email by having a unique address programmed in each device.

Having thus described the invention in rather full detail, it will be understood that such detail need not be strictly adhered to, but that additional changes and modifications may suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What is claimed is:

1. A method for enabling interactive participation by a plurality of spectators attending a live spectator event within a venue, each participating spectator employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface, the method comprising the steps of:

providing a wireless communication system adapted to transmit and receive messages with said interactive device;

disseminating at least one promotional message to said spectators through said user output interface of said interactive device;

querying said spectators to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device;

receiving answers entered by said spectators;

transferring said answers to a central processor;

processing said answers into results using said central processor; and

announcing said results.

2. A method as recited by claim 1, further comprising the step of awarding a prize to at least one spectator who has entered an answer in response to said querying.

3. A method as recited by claim 1, further comprising the step of relaying informational items selected from the group consisting of news reports, traffic condition reports, weather conditions, weather forecasts, sports news and scores, said informational items being transmitted by said wireless communication system and output using said user output interface.

4. A method as recited by claim 1, wherein said promotional message solicits the purchase of goods or services by

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said spectator and said method further comprises accepting orders for said purchase entered using said user input interface, transmitted by said interactive device, and submitted to a vendor for fulfillment for monetary consideration.

5. A method as recited by claim 4, wherein said goods comprise at least one item of food, beverage, and promotional merchandise.

6. A method as recited by claim 4, wherein said services comprise admission tickets for a future live event.

7. A method as recited by claim 1, wherein said promotional message is disseminated for monetary consideration from an advertiser.

8. A method as recited by claim 1, wherein said interactive device transmits indicia identifying said device.

9. A method as recited by claim 1, further comprising collecting demographic characteristics of at least a portion of said spectators.

10. A method as recited by claim 1, wherein said promotional message is selected based on said demographic characteristics of said spectator.

11. A method as recited by claim 1, wherein said querying is limited to a portion of said spectators.

12. A method as recited by claim 1, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

13. A method as recited by claim 1, wherein said interactive device is a member selected from the group consisting of cellular telephones, two-way pagers, wireless personal digital assistants, and wireless pocket PC's.

14. A method as recited by claim 1, wherein said wireless interactive device is Internet-enabled and communicates therewith.

15. A method as recited by claim 1, wherein said user input interface comprises a plurality of keys.

16. A method as recited by claim 1, wherein said user input interface comprises at least one member selected from the group consisting of a keypad, selection buttons, a touch screen, a pointing device, a rotatable dial, and a voice recognition system.

17. A method as recited by claim 1, wherein said user output interface comprises at least one of an alphanumeric text display, a graphical display, and an audio output means.

18. A method as recited by claim 1, wherein said querying step is accomplished by at least one display visible to said spectators.

19. A method as recited by claim 1, wherein said querying step is accomplished by a notice audible to said spectators.

20. A method as recited by claim 1, wherein said querying step is accomplished by a message transmitted by said wireless communication system to said interactive device and output by said user output interface.

21. A method as recited by claim 1, wherein said announcing step is accomplished by a notice audible to said spectators.

22. A method as recited by claim 1, wherein said announcing step is accomplished by at least one display visible to said spectators.

23. A method as recited by claim 1, wherein said announcing step is accomplished by a message transmitted by said wireless communication system to said interactive devices and output by said user output interface.

24. A method as recited by claim 1, further comprising the offering of a special-purpose wireless interactive device for sale or rent.

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25. A method as recited by claim 1, wherein said live spectator event comprises multiple activities occurring simultaneously in different locations within a venue.

26. A method as recited by claim 1, further comprising broadcasting informational items appointed for receipt by said wireless interactive device.

27. A method as recited by claim 4, wherein said interactive device further comprises localization circuitry and transmits its position obtained from said localization circuitry and indicia identifying said device and said position and indicia are used to effect delivery of goods to said spectator.

28. A method as recited by claim 2, wherein said prize is delivered to said spectator.

29. A method as recited by claim 2, wherein said prize is transferred electronically to said spectator.

30. A method as recited by claim 1, wherein said live spectator event is a sporting event.

31. A system for enabling interactive participation by a plurality of spectators attending a live spectator event at a venue, each participating spectator employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface, the system comprising:

a wireless communication system adapted to transmit and receive messages with said interactive device;

means for disseminating least one promotional message to said spectators through said user output interface of said interactive device;

means for querying said spectators to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device;

a central processor adapted into process into results said answers entered by said spectators, received by said wireless communications system, and transferred to said central processor;

means for announcing said results.

32. A system as recited by claim 31, wherein said disseminating means comprises a promotional message server in data communication with said wireless communications system, said promotional message server providing said at least one promotional message from plurality of messages stored in said promotional message server and sending said promotional message to said wireless interactive device through said wireless communications system.

33. A system as recited by claim 31, wherein said querying means comprises at least one display visible to said spectators.

34. A system as recited by claim 31, wherein said announcing means comprises at least one display visible to said spectators.

35. A system as recited by claim 31, further comprising at least one prize appointed to be awarded to at least one of said spectators.

36. A system as recited by claim 31, further comprising an order processing server in data communication with said wireless communications system, said order processing server receiving orders for goods and services entered by said spectators using said user input interface and communicating said orders to a provider of goods and services for order fulfillment.

37. A system as recited by claim 31, wherein said wireless interactive device is a member selected from the group consisting of cellular telephones, wireless personal digital assistants, wireless pocket PC's, and two-way pagers.

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38. A system as recited by claim 31, wherein said wireless interactive device is Internet enabled and communicates therewith.

39. A system as recited by claim 31, wherein said wireless interactive device incorporates circuitry for receiving broadcast informational items and said system further comprises a broadcasting system broadcasting said informational items appointed to be received by said wireless interactive device.

40. A system as recited by claim 31, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

41. A system as recited by claim 31, wherein said user output interface bears at least one of said query directed to said spectators and said results.

42. A system as recited by claim 31, further comprising at least one distributed receiving server in data communication with said central processor and said wireless communications system, and wherein a computer program stored in said receiving server receives said answers and transfers said answers to said central processor.

43. A system as recited by claim 31, further comprising at least one visible display bearing at least one of said query directed to said spectators and said results.

44. A system as recited by claim 43, wherein said visible display comprises a plurality of video monitors dispersed throughout said venue.

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45. A system as recited by claim 43, wherein said visible display comprises a scoreboard visible to the spectators in said venue.

46. A system as recited by claim 43, wherein said visible display comprises a large screen display visible to the spectators in said venue.

47. A system as recited by claim 31, wherein a computer program stored in said central processor is operative to process into results said answers entered by said spectators.

48. A system as recited by claim 32, wherein said promotional message server employs demographic characteristics of said spectators in selecting said promotional message.

49. A system as recited by claim 31, further comprising an order fulfillment server in data communication with said central processor, and wherein a computer program stored in said order fulfillment server receives orders for goods and services placed by said spectators and communicates said orders to a provider of said goods and services.

50. A system as recited by claim 49, further comprising a connection to an electronic financial network by which monetary consideration is received for said goods and services provided to said spectator by said provider.

51. A system as recited by claim 31, further comprising localization circuitry.

52. A system as recited by claim 31, wherein said live spectator event is a sporting event.

* * * * *

EXHIBIT 11

US006975878B2

(12) **United States Patent**
Inselberg(10) **Patent No.:** **US 6,975,878 B2**
(45) **Date of Patent:** ***Dec. 13, 2005**(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**(76) Inventor: **Eric Inselberg**, P.O. Box 833, Short
Hills, NJ (US) 07078(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 72 days.This patent is subject to a terminal dis-
claimer.(21) Appl. No.: **10/661,871**(22) Filed: **Sep. 12, 2003**(65) **Prior Publication Data**

US 2004/0058697 A1 Mar. 25, 2004

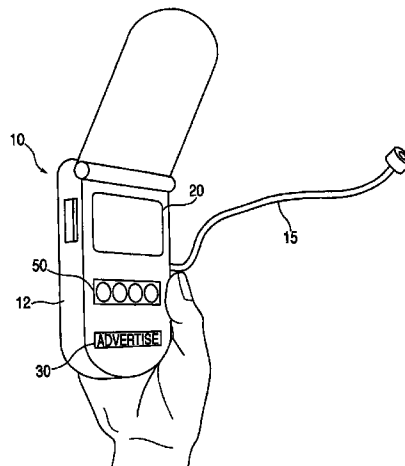
Related U.S. Application Data(63) Continuation of application No. 09/854,267, filed on
May 11, 2001, now Pat. No. 6,650,903, which is a
continuation of application No. 09/656,096, filed on
Sep. 6, 2000, now Pat. No. 6,434,398.(51) **Int. Cl.⁷** **H04Q 7/20**(52) **U.S. Cl.** **455/517; 455/575.6; 463/39;**
463/40(58) **Field of Search** 455/517, 3.03,
455/3.05, 3.06, 575.6, 3.01, 550.1, 3.02,
455/414.1; 463/36-42; 725/9, 24, 32, 86,
725/74; 434/322, 323, 362, 350; 273/460; 705/10-14(56) **References Cited****U.S. PATENT DOCUMENTS**

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Inc.*Primary Examiner*—Jean Gelin(74) *Attorney, Agent, or Firm*—Ernest D. Buff & Associates,
LLC; Ernest D. Buff; Gordon E. Fish(57) **ABSTRACT**

The present invention relates to a method for providing interactive audience participation at live spectator events. The method includes providing spectators with an interactive device that presents a promotional message and includes a user interface, broadcasting audio programming to the spectator through the interactive device, querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device, transmitting the answers to a central processor, storing the answers as spectator data, processing the spectator data into results, storing the results of the processing of the spectator data and broadcasting the results of the processing of the spectator data.

27 Claims, 2 Drawing Sheets

U.S. Patent

***Dec. 13, 2005**

Sheet 1 of 2

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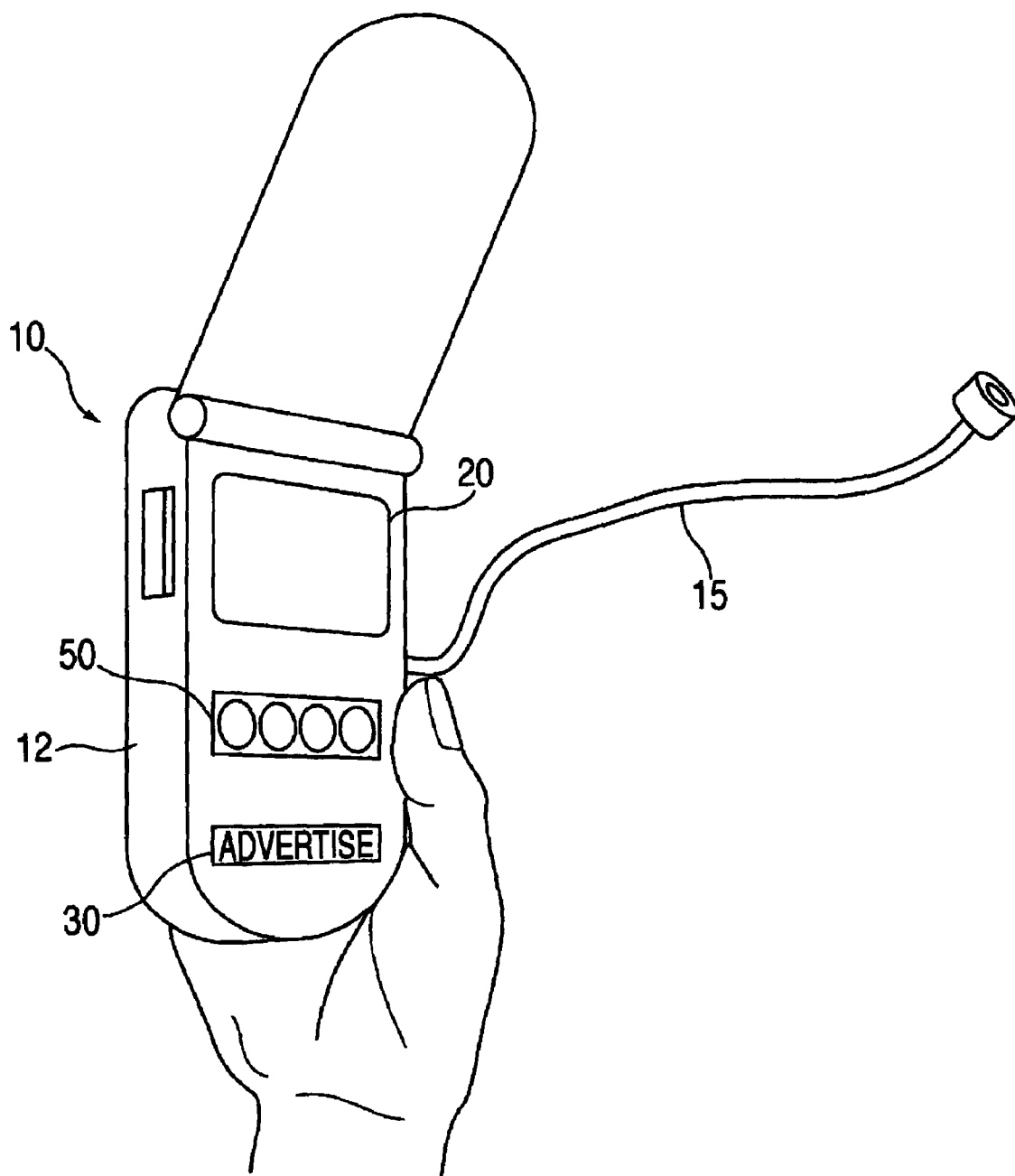


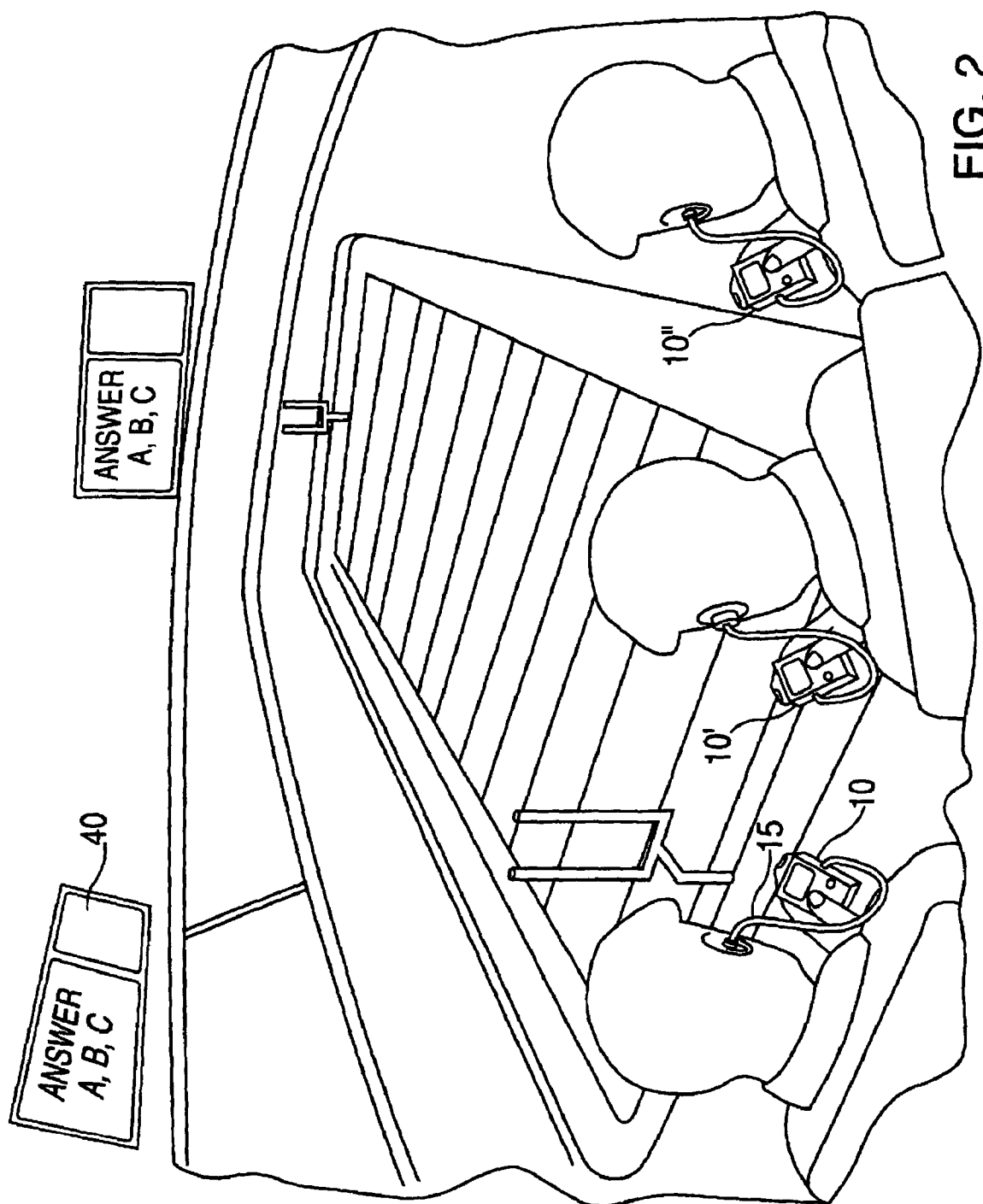
FIG. 1

U.S. Patent

***Dec. 13, 2005**

Sheet 2 of 2

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METHOD AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE SPECTATOR EVENT

RELATED U.S. APPLICATION DATA

This application is a continuation of applicant's U.S. patent application Ser. No. 09/854,267, filed May 11, 2001, now U.S. Pat. No. 6,650,903, which, in turn, is a continuation of applicant's U.S. patent application Ser. No. 09/656,096, filed Sep. 6, 2000, now U.S. Pat. No. 6,434,398.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a method for interactive audience participation at a live spectator event. The invention also relates to an apparatus that is used in connection with such method.

2. Description of the Prior Art

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live spectator events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON™. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live spectator events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a sports team. Accordingly, in order to continue attracting live audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and expressing one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these

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opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally, fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often-heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, sometimes the seat location of the attendee fails to offer an unobstructed view. On other occasions a technical ruling may be made by a game official that is not fully explained to those in attendance but is fully analyzed by television and/or radio announcers.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of audience members at live spectator events by more fully involving the audience. In a preferred embodiment of the invention, the method of enhancing audience participation comprises communicating information to fans at a sporting event using an interactive device that allows fans to respond to displayed messages. Individual fan feedback is stored, processed (e.g., tabulated) and displayed back to the individual fan or the audience as a whole. The interactive device is preferably a wireless, hand held device, which includes an audio component to allow the user to listen to play-by-play and expert commentary during the live event. The audio component may also provide spectators with other desirable information such as traffic and weather reports. Since the device is easily transported, the fan can carry it on trips to the concession stands or to the restrooms. Further, the method presents promotional messages of sponsors and advertisers to each user of the interactive device. The promotional message may be permanently affixed to the device and/or transmitted to each device via open band lines. In a more specific method, the location of individual fans is identified by means of a transceiver located within the interactive device.

The method can be used to conduct contests wherein a fan is asked to predict the next event or events to take place (e.g. the outcome of the next at bat in a baseball game or the next play or plays to be called in a football game on a real time basis, all star balloting, pitching changes, etc.). Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the fan selects from a list of promptings and/or possible answers. A fan that correctly predicts a predetermined number of outcomes may be awarded an electronic coupon that can be redeemed for concessions and/or other prizes. Alternatively, the prize could be delivered to the fan based on the location of the fan's interactive device by means of communication with the transceiver located therein.

One advantage of the invention is that promotional messages and advertisements receive a higher degree of atten-

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tion from fans, because the fans are more interested in the interactive content than in passively viewing or listening to broadcast messages.

Another advantage of the invention is that it is possible to receive instantaneous and correlated feedback from a large number of fans, which is valuable information for, by way of example, sponsors, teams and leagues.

A further advantage of the invention is that fans value the expert commentary, freedom of movement and the interactivity afforded by the method, increasing their enjoyment and the perceived value of attending a live sporting event.

Other objects, features and advantages of the invention will be readily apparent from the following detailed description of a preferred embodiment thereof taken in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood and further advantages will become apparent when reference is had to the following detailed description of the preferred embodiments of the invention and the accompanying drawings, wherein like reference numeral denote similar elements throughout the several views and in which:

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of hand held device used in connection with the interactive audience participation system of the present invention.

FIG. 2 is a schematic diagram of audience members at a spectator event utilizing the interactive audience participation system of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is shown in FIG. 1 a hand held, interactive device **10** adapted for use in connection with the interactive audience participation system of the present invention.

The device is preferably provided to audience members at a live spectator event as shown in FIG. 2. The device is adapted to provide information to the user. In a preferred embodiment the device **10** includes a housing **12** with an electronic display opening. The device **10** preferably includes a multiband radio incorporated therein with an audio receiving circuit and an audio output means (not shown). The audio output means is in electrical communication with the audio receiving circuit in a manner known in the art. The radio is adapted to receive AM, FM and/or VHF signals from a number of predetermined frequencies.

An earpiece **15** is included to allow the user to listen to the radio associated with the device without annoying neighboring fans. It is noted that other listening means could be employed such as earphones and the like.

An electronic display (visual display) **20** is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display is in electrical communication with a local microprocessor mounted within the housing. A transceiver in electrical communication with the local microprocessor allows for the transmission and receipt of data from a central processor

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(not shown) in a manner known in the art. The electronic display is adapted to display data received from the local microprocessor. For example, the visual display is adapted to display messages that ask the audience member to answer a question or provide an opinion. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display.

The device **10** preferably presents promotional messages from sponsors and/or advertisers, essentially underwriting the cost of a user interface device. Such messages can be in the form of indicia **30** located (e.g., physically imprinted) on the device. Additionally, the messages can be visually displayed on the visual display **20** of the device or can be aurally communicated through the same. The messages can be in the form of pre-programmed visual messages or recordings or can be transmitted live during the spectator event via open band lines. The device is preferably provided to each audience member as part of the price of admission or, alternatively, as an optional item purchased by the audience member, and subsidized by the promotional messages.

In one embodiment, a large screen display **30**, as depicted in FIG. 2, remotely located from the fan (e.g., a JUMBOTRON™ display) is used for querying users of the interactive device. A user interface **50** on the device **10** allows an audience member to enter a response to queries. Examples of simple user interfaces are a keypad, selection buttons, touch screen, rotatable dial or voice recognition, but any other user interface could be incorporated within the invention. In an alternate embodiment, the user interface device is adapted to interact with other fans by allowing for the broadcasting of messages to all audience members or, alternatively, from one individual audience member to another. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

The responses of the audience members are sent to a central processor (not shown) that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device **10** or a large screen display **40** remotely located from the fan. FIGS. 1 and 2. The processed information could be a compilation of the number of similar responses or as a percentage of total responses or graphically in a bar chart, pie chart or some other graphical, numerical or combined graphical and numerical representation of the data.

One representative embodiment of the present invention is a method of enhancing the enjoyment of spectators at live entertainment venues.

In the first step of the method, spectators are provided with an interactive device **10**, **10'** and **10''**. FIG. 2. The interactive device may be any device which permits broadcast of audio or video or both audio and video and provides the spectator with a user interface for sending replies to queries. The interactive device is adapted to present promotional messages either by placing the same on the device or by visually or aurally transmitting messages through the same.

Optionally, the device could be used to send messages to another fan, group of fans or all fans. This feature could be enabled in a manner similar to email by having a unique address programmed in each device. Optionally, the users could be queried to input a section and seat number. Inputting a seat number has the additional benefit of allowing delivery of awards, incentives and prizes directly to the spectator's seat. Another way to deliver prizes to spectators would be completely electronic. An award could be sent

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electronically to the unique address programmed in the interactive device, which could then be redeemed at either a central location or at one of the concession stands. This could be done without entering a seat number.

Another step involves broadcasting audible programming to spectators, using the interactive device. This is accomplished by incorporating an audio receiving circuit within the device which is adapted to receive RF and/or VHF signals at predetermined frequencies.

Querying of spectators, wherein answers may be entered by spectators using their interactive devices, is yet another step of the method.

Transmitting the answers from the spectators to a receiver or receivers is the next step in the method followed by receiving the answers, either at a central processing station or at distributed processing stations.

Storing the answers, at least temporarily, as spectator data, and processing the spectator data are additional steps in the method. This is followed by storing the results of the processing of the spectator data, at least temporarily.

Displaying the results of the processing of the spectator data is a step that generally follows the processing of the spectator data. This provides feedback to the spectators, showing them how their answers compared to other spectators. The steps of querying, transmitting, receiving, storing and displaying may all be accomplished via technology known in the art. Additionally, the steps of querying and transmitting are preferably achieved using wireless communications known in the art. The wireless communications are preferably selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions.

The offering of prizes to a selected spectator or spectators who have responded to the querying, participated in the interactive games or answered correctly quiz questions may be utilized to enhance the enjoyment of spectators.

Another optional embodiment of the method allows for wireless transmitting of the answers and/or responses to the querying.

Ultra-wide band transmission is a promising technology for the broadcasting of messages and transmission of spectators' responses. It has the advantage of multiplexing over a single frequency.

It is contemplated that the step of displaying the results may be achieved by using a stadium large screen display. Alternatively, the step of displaying the results may be achieved using a stadium monitor system or using a display incorporated in the interactive device or such information may be broadcast as audibly or both audibly and visibly.

The present invention may be embodied in other forms without departing from the spirit or essential attributes thereof and accordingly reference should be made to the claims rather than to the foregoing specification as indicating the scope thereof.

What is claimed is:

1. A method for interactive audience participation at a live event attended by a plurality of spectators comprising the steps of:

providing each of the spectators at the live event with an interactive device, wherein the interactive device presents a promotional message and wherein the interactive device includes a user interface;

querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device;

transmitting the answers to a central processor;

storing the answers as spectator data;

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processing the spectator data into results;

storing the results of the processing of the spectator data; and

broadcasting the results of the processing of the spectator data to said plurality of spectators attended the live event.

2. The method of claim 1 further including the step of awarding prizes to at least one selected spectator who has answered the querying.

3. The method of claim 1 wherein the steps of querying and transmitting are achieved using wireless communications.

4. The method of claim 3 wherein the wireless communications are selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions.

5. The method of claim 1 wherein the step of querying is achieved using a large screen display.

6. The method of claim 1, wherein the step of querying is achieved using the interactive device.

7. The method of claim 1 wherein the step of broadcasting the results is achieved using at least one of a large screen display, a stadium monitor system, or a display incorporated in the interactive device.

8. The method of claim 7 wherein the step of broadcasting the results is achieved using the large screen display.

9. The method of claim 1 wherein the step of broadcasting the results is achieved using the interactive device.

10. The method of claim 1 wherein the step of broadcasting the results includes the wireless transmission of data from the central processor to the interactive device for visual display thereon.

11. A hand held device for interactive audience participation at a live spectator event comprising:

a housing including an electronic display opening;

a local microprocessor being mounted within the housing;

a user interface configured to be employed by a spectator at the live spectator event and comprising a plurality of keys in electrical communication with the microprocessor for manually entering data to the local microprocessor;

transceiver means in electrical communication with the local microprocessor for transmitting and receiving data to and from a central processor, and

an electronic display in electrical communication with the local microprocessor, the electronic display being mounted within the housing and being visible through the electronic display opening in the housing, and the electronic display being adapted to display data from the microprocessor and a promotional message wirelessly received from the central processor.

12. The hand held device of claim 11 wherein the device utilizes wireless communications for transmitting and receiving data from the central processor.

13. The hand held device of claim 12 wherein the wireless communications are selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions.

14. A method for interactive audience participation at a live event attended by a plurality of spectators using interactive devices having a user interface, the method comprising the steps of:

presenting promotional messages to the spectators using the interactive devices;

querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device;

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transmitting the answers to a central processor;
 storing the answers as spectator data;
 processing the spectator data into results;
 storing the results of the processing of the spectator data;
 and
 broadcasting the results of the processing of the spectator
 data to said plurality of spectators attended the live
 event.

15. The method of claim 14 wherein the step of querying
 is achieved using a large screen display.

16. The method of claim 14, wherein the step of querying
 is achieved using the interactive device.

17. The method of claim 14 wherein the step of broad-
 casting the results is achieved using at least one of a large
 screen display, a stadium monitor system, or the display of
 the interactive device.

18. The method of claim 14 wherein the step of broad-
 casting the results is achieved using the large screen display.

19. The method of claim 14 wherein the step of broad-
 casting the results is achieved using the display of the
 interactive device.

20. The method of claim 14, wherein the interactive
 device further comprises an audio receiving circuit for
 receiving an audio signal at a predetermined frequency and
 the method further comprises the step of providing audio
 transmission, whereby the spectators are furnished with
 audible programming.

21. The method of claim 20, wherein the audible pro-
 gramming comprises at least one of play-by-play, expert
 commentary, traffic reports, and weather reports.

22. The method of claim 14, wherein the promotional
 messages are transmitted wirelessly to the interactive
 devices.

23. A hand held device for interactive audience partici-
 pation at a live spectator event comprising:
 a housing including an electronic display opening;
 a local microprocessor being mounted within the housing;
 a user interface configured to be employed by a spectator
 at the live spectator event for manually entering data to
 the local microprocessor, the user interface being in
 electrical communication with the local microproces-
 sor;

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transceiver means in electrical communication with the
 local microprocessor for transmitting and receiving
 data to and from a central processor, and
 an electronic display in electrical communication with the
 local microprocessor, the electronic display being
 mounted within the housing and being visible through
 the electronic display opening in the housing, and
 the electronic display being adapted to display data from
 the microprocessor and a promotional message wire-
 lessly received from the central processor.

24. The hand held device of claim 23 wherein the user
 interface comprises a plurality of keys in electrical commu-
 nication with the local microprocessor.

25. The hand held device of claim 23 wherein the user
 interface comprises at least one member selected from the
 group consisting of a keypad, selection buttons, a touch
 screen, a rotatable dial and a voice recognition system.

26. The hand held device of claim 23 further comprising:
 an audio receiving circuit for receiving an audio signal at
 a predetermined frequency; and

an audio output means, the audio output means being in
 electrical communication with the audio receiving cir-
 cuit.

27. A method for interactive audience participation at a
 live event attended by a plurality of spectators using wireless
 interactive devices having a user interface, the method
 comprising the steps of:

querying the spectators, wherein answers to the querying
 may be entered by spectators via the user interface of
 the wireless interactive device;

transmitting the answers to a central processor;

storing the answers as spectator data;

processing the spectator data into results;

storing the results of the processing of the spectator data;
 and

broadcasting the results of the processing of the spectator
 data to said plurality of spectators attended the live
 event.

* * * * *

EXHIBIT 12

US006996413B2

(12) **United States Patent**
Inselberg(10) **Patent No.:** **US 6,996,413 B2**(45) **Date of Patent:** **Feb. 7, 2006**(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**(76) Inventor: **Eric Inselberg**, 420 E. 61st St., Apt.
32D, New York, NY (US) 10021(*) Notice: Subject to any disclaimer, the term of this
patent is extended or adjusted under 35
U.S.C. 154(b) by 0 days.(21) Appl. No.: **10/792,170**(22) Filed: **Mar. 3, 2004**(65) **Prior Publication Data**

US 2004/0171381 A1 Sep. 2, 2004

Related U.S. Application Data(63) Continuation-in-part of application No. 10/378,582,
filed on Mar. 5, 2003, now Pat. No. 6,760,595, which
is a continuation-in-part of application No. 09/854,
267, filed on May 11, 2001, now Pat. No. 6,650,903,
which is a continuation of application No. 09/656,
096, filed on Sep. 6, 2000, now Pat. No. 6,434,398.(51) **Int. Cl.**
H04Q 7/20 (2006.01)(52) **U.S. Cl.** **455/517**; 455/575.6; 463/39;
463/40(58) **Field of Classification Search** 455/517,
455/575.6, 90.1, 66.1; 463/36, 39, 40; 705/26,
705/27, 37, 39

See application file for complete search history.

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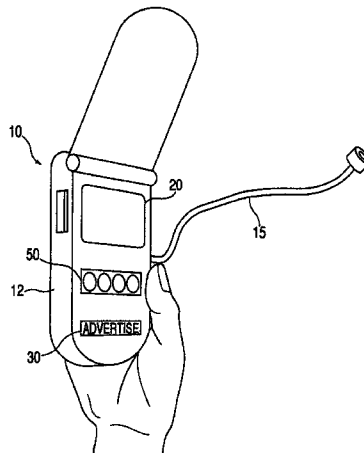
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Primary Examiner—Jean Gelin(74) *Attorney, Agent, or Firm*—Ernest D. Buff & Associates, LLC; Ernest D. Buff; Gordon E. Fish(57) **ABSTRACT**

A method and apparatus provide interactive audience participation at live spectator events. Enjoyment for a plurality of spectators is enhanced. Participating spectators employ wireless interactive devices that present a promotional message and include user input and output interfaces. Spectators are queried, and enter answers via the user input interface. The answers are transmitted to a central processor, stored as spectator data, and processed into results. A visual display or the user output interface announces the results to the spectators.

73 Claims, 3 Drawing Sheets

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Feb. 7, 2006

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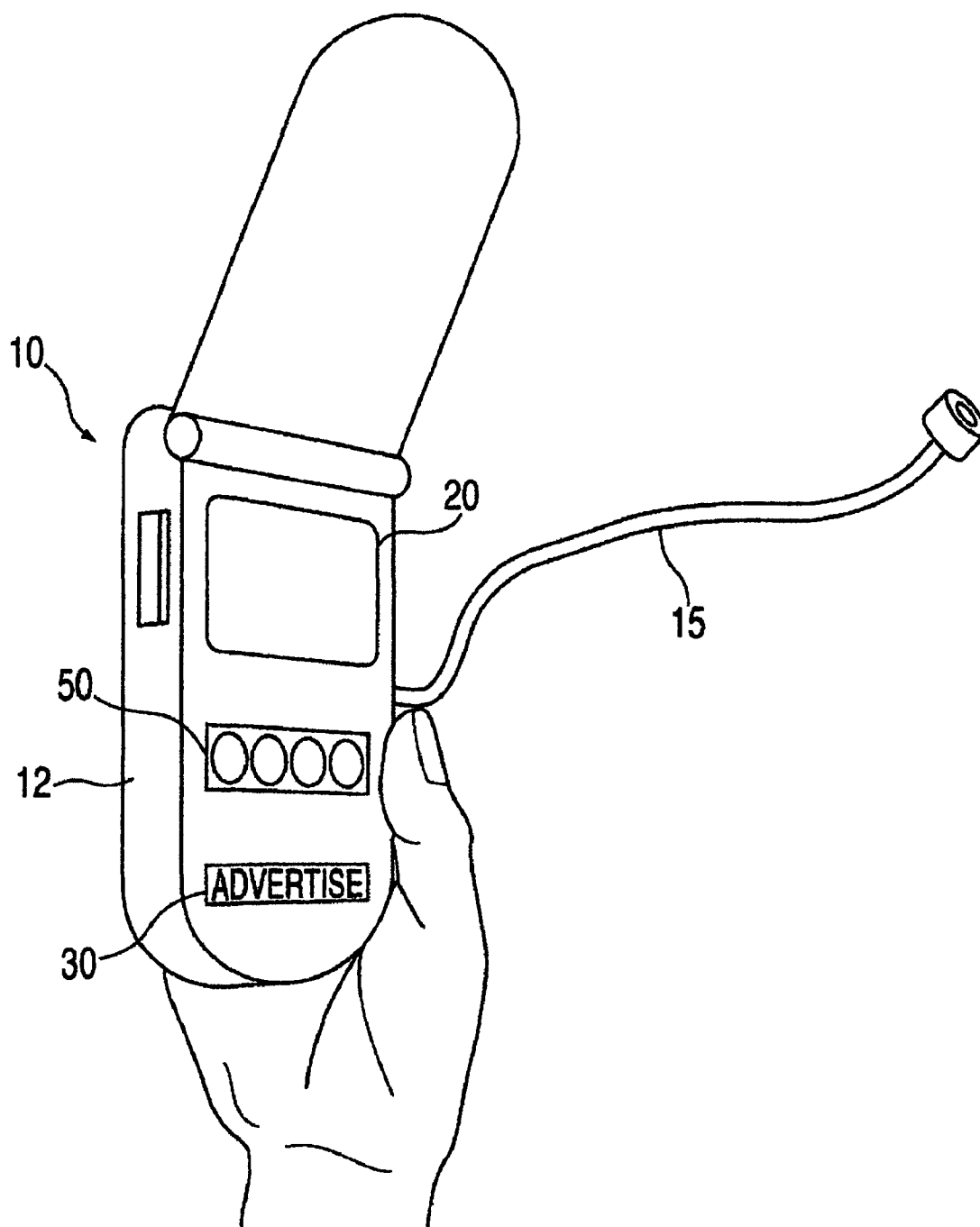


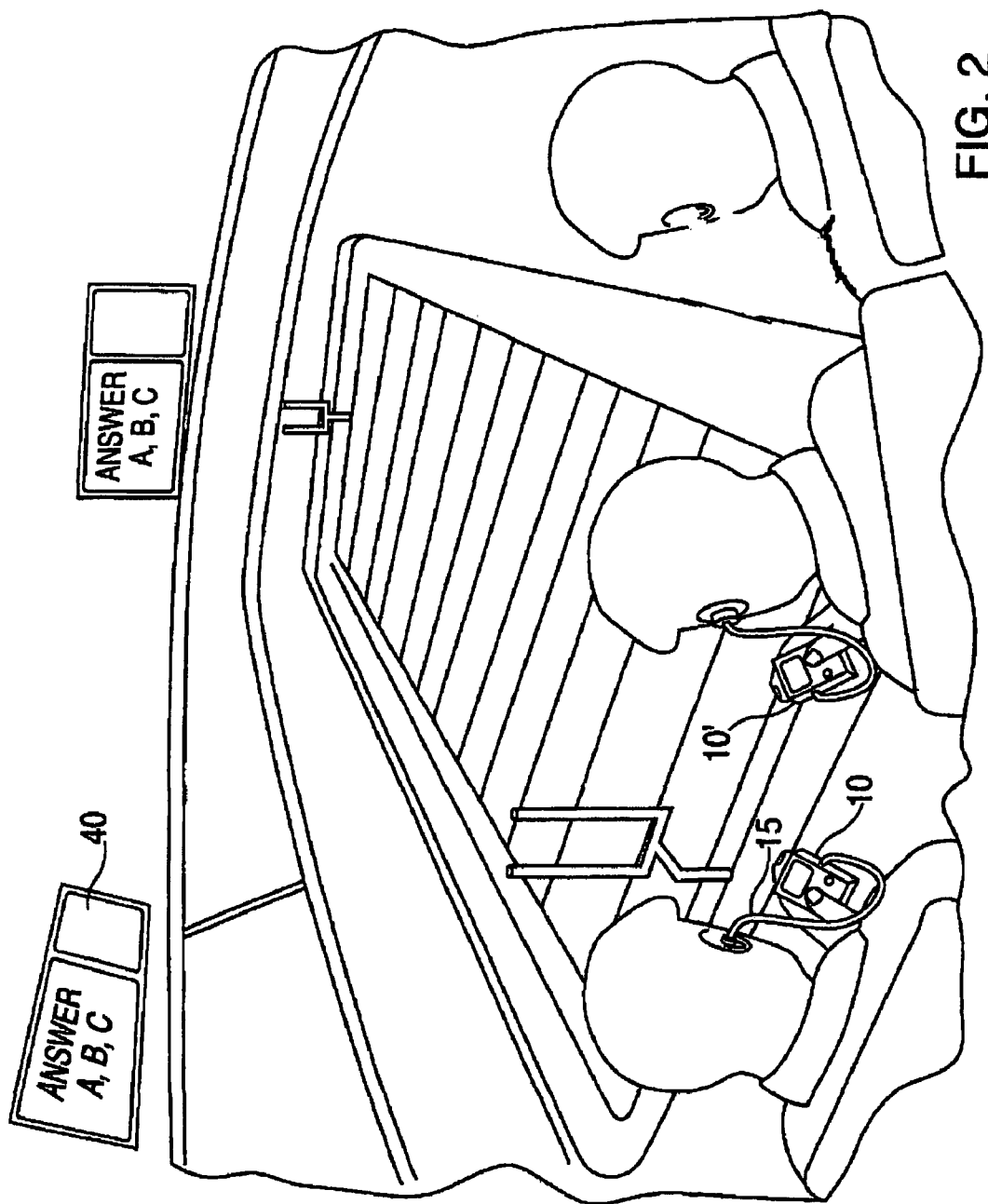
FIG. 1

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Feb. 7, 2006

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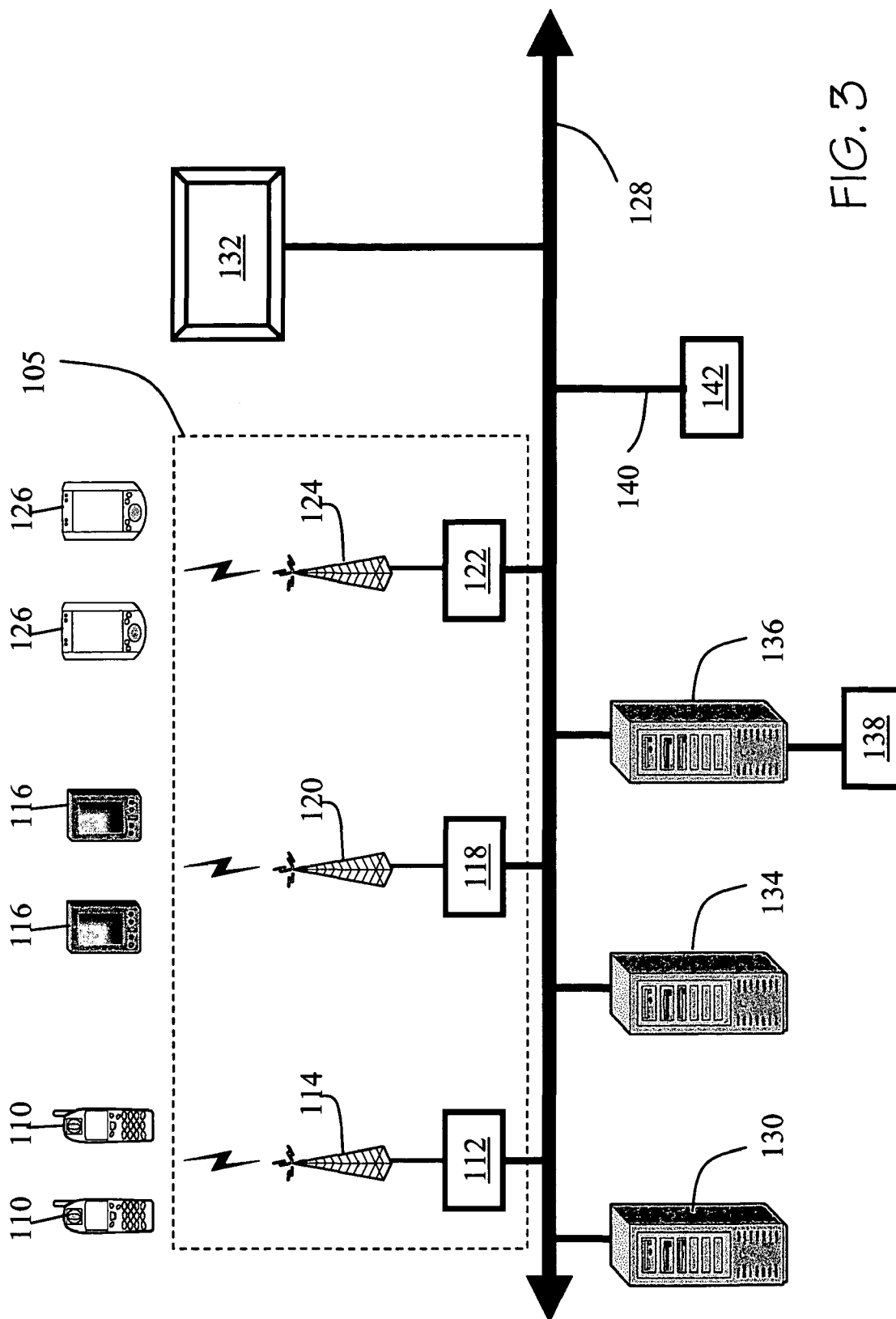


FIG. 3

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METHOD AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE SPECTATOR EVENT

RELATED U.S. APPLICATION DATA

This application is a continuation-in-part of U.S. patent application Ser. No. 10/378,582, filed Mar. 5, 2003 now U.S. Pat. No. 6,760,595 which, in turn, is a continuation-in-part of U.S. patent application Ser. No. 09/854,267, filed May 11, 2001, now U.S. Pat. No. 6,650,903, issued Aug. 18, 2003, which, in turn, is a continuation of U.S. patent application Ser. No. 09/656,096, filed Sep. 6, 2000, now U.S. Pat. No. 6,434,398, issued Aug. 13, 2002. Each of application Ser. Nos. 10/378,582, 09/854,267, and 09/656,096 is incorporated herein in the entirety by reference thereto.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a system and method for interactive audience participation at a live spectator event; and more particularly, to a system and method by which spectators answer queries using wireless interactive devices, the answers are correlated and results are announced, thereby enhancing the spectators' experience and enjoyment.

2. Description of the Prior Art

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live spectator events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON®. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live spectator events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a sports team. Accordingly, in order to continue attracting live audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

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One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members ordinarily spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and expressing one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally, fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often-heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, any particular seat location affords its occupant only a single view of a playing field. In addition, some locations fail to offer an unobstructed view of the entire field. On other occasions a technical ruling made by a game official is not fully explained to those in attendance but is extensively analyzed by television and/or radio announcers, often with one or more instant replays of the event in question. Fans commonly resort to carrying conventional portable radio and TV receivers to games, whereby they obtain game commentary, instant replays, and the like to complement what they directly observe or obtain from the stadium's own announcers, scoreboards, and video displays.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

Accordingly, there remains a need for a method and system that provides interaction that heightens the enjoyment experienced by participants at a live spectator event.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of audience members at live spectator events by more fully involving the audience. In a preferred embodiment of the invention, there is provided a method for enabling interactive participation at a live spectator event held at a live event venue and attended by a plurality of persons, at least a portion of whom are participating spectators. Each participating spectator employs a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface. The method comprises communicating information and queries to participants at the event, such as a sporting event, using a wireless interactive device in conjunction with a wireless communications system. By having and using such a wireless interactive device, participating spectators are permitted to respond to displayed messages or to participate in contests and interactive activities of various sorts. Individual fan feedback is received and transferred to a central processor for storage and processing (e.g., tabulation or statistical analysis). Thereafter, the results are optionally announced to the individual fan or to the audience as a

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whole. The interactive device is preferably a wireless, hand held device, having user input and output interfaces. The user input interface preferably comprises at least one member selected from the group consisting of a keypad, selection buttons, a touch screen, a rotatable dial, cursor keys, a pointing device (e.g. a mouse or trackball), and a voice recognition system. The user output interface preferably comprises a visible display for alphanumeric, textual, or graphic images and audio output means such as a speaker or earphone. Preferably the device is a cellular telephone, two-way pager, or wireless personal digital assistant (PDA) or pocket PC. It is further preferred that the device be Internet enabled, and that the wireless communication system employ the Internet in the bidirectional communication of data. Alternatively, the interactive device may be a special-purpose device incorporating at least the features needed for the practice of the present method. Communication protocols other than the Internet may alternatively be employed to provide the desired interactive communication.

The device is easily transported, permitting the spectator to carry it to other locations in the event venue, e.g. on trips to the concession stands or to the restrooms. Further, the method presents audio or video promotional messages of sponsors and advertisers to each user of the interactive device. The promotional message may be permanently affixed to the device and/or transmitted to each device via any available communication modality.

In an aspect of the invention, contests may be conducted wherein a fan is asked to predict the next event or events to take place (e.g. the outcome of the next at bat in a baseball game or the next play or plays to be called in a football game on a real time basis, all star balloting, pitching changes, etc.). Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the fan selects from a list of promptings and/or possible answers. Prizes may be offered. The degree of attention and receptivity accorded to promotional messages and advertisements received by patrons using an interactive device at a live spectator event in accordance with the present method is beneficially increased. The combination of the atmosphere of the live venue with the interactive content; and the stimulus of active participation and interaction with other fans frequently heightens the degree of interest of spectators at a live event for proffered advertisements over that accorded by those who passively view or hear broadcast coverage at home or another remote location. The spontaneity and excitement engendered at the actual event enhance the likelihood that a fan will perceive advertised items favorably. A fan at the live event is also more likely to respond positively by purchasing food and beverage items, souvenirs, team promotional merchandise, and the like.

In a further aspect the method makes it possible to receive instantaneous and correlated feedback from a large number of motivated patrons. Their comments, directed both to advertised products and services and to the entertainment itself, are valuable information for sponsors, teams, leagues, and providers of goods and services, for example.

In yet another aspect of the invention, event-related audio or video content are optionally transmitted wirelessly to the interactive device during the live event for output to the user. The transmitted content optionally includes other desirable informational items such as news, traffic, weather conditions and forecasts, news and scores of other sporting events. The availability of such material increases spectators' enjoyment and the perceived value of attending a live sporting event. The method and system of the invention are advantageously practiced at a live spectator event, by which is meant an

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organized event wherein a large number of patrons are gathered to witness and enjoy in real time any form of entertainment, including an event such as an artistic or athletic performance or an important business, civic or religious event. Ordinarily, such live events are scheduled in advance and involve programmatic content or entertainment, e.g. comprising an athletic contest, concert, speaker, performer, exhibition, or the like. Events frequently, but not always, require the payment of an entry fee by an attendee. Live spectator events in most cases are open to any member of the public who purchases the requisite ticket or otherwise pays the entry fee; alternatively, participation may be restricted to persons invited by organizers of the event.

Such live spectator events may be conducted at permanent facilities, such as indoor and outdoor stadiums and arenas for sporting events and other public gatherings; amphitheatres; auditoriums; concert halls and theaters; race tracks for animals or vehicles; theme parks; convention centers; casinos; exhibition halls; shopping centers; museums; or other similar venues associated with organized gatherings of large numbers of people. Live spectator events can also be held at facilities that are temporary and not ordinarily appointed for large gatherings, such as golf courses or temporary urban road racing courses. It is contemplated that the present method may be carried out at events of the aforementioned or similar types.

Often the location of the live spectator event is a building with defined entrances or an indoor or outdoor area demarcated by fences or other barriers with defined points of entry that may comprise gates, turnstiles, or the like. Many live events take place in a stadium, arena, or auditorium having defined spectator seat locations, e.g. seats uniquely denoted by section, row, and seat numbers or the like. In addition to the actual performance area (such as a playing field or concert stage) and the appointed spectator area, event facilities ordinarily have auxiliary public areas associated therewith. Such areas provide facilities and services that are desirably or essentially associated with the live spectator event. The auxiliary areas are generally adjacent or in close proximity, and may include non-exclusively: ticket windows; passageways; rest rooms; clubs; restaurants; concession stands selling food and beverages; lounges; overflow areas with audio and/or video links to the principal event area; shops selling souvenirs, promotional merchandise, novelties, or related items; and service facilities such as parking lots and stations for public transportation; and the like. For example, patrons at an athletic event frequently engage in social activity in a venue's parking lot before or after the event, often including the consumption of food and beverage, a practice commonly known as "tailgating." Such activity bears a clear thematic relationship to the athletic event itself, since there is ordinarily extensive conversation about the event, the competing teams or players, or the like. Similar activity is common in connection with concerts and other life spectator events as well. All of these and related activities that are within the penumbra of the programmatic content of the live spectator event and occurring in the environs of the corresponding live event venue are to be understood as falling within the bounds of the live spectator event. Therefore, it will be understood that the term "live event venue" as used herein and in the subjoined claims, refers collectively to the primary performance area at which the live event is conducted, the appointed spectator area, and auxiliary areas associated with the location, including areas such as those enumerated above.

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BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood and further advantages will become apparent when reference is had to the following detailed description of the preferred embodiments of the invention and the accompanying drawings, wherein like reference numeral denote similar elements throughout the several views and in which:

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of a hand held device used in connection with the interactive audience participation system of the present invention;

FIG. 2 is a schematic diagram of audience members at a spectator event utilizing the interactive audience participation system of the present invention; and

FIG. 3 is a schematic diagram of a system of the invention for enhancing spectator enjoyment and interaction.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to FIG. 1, there is shown one form of a hand held, interactive device **10** adapted for use in connection with the interactive audience participation system of the present invention. In one embodiment, device **10** is employed by audience members at a live event as shown in FIG. 2. The device is adapted to communicate bi-directionally with a wireless communications system operative at a live spectator event, to provide information to a user, and to accept entry of information through a user input interface for transmission to the wireless communications system. In a preferred embodiment the device **10** includes a housing **12** with an electronic display opening. An electronic display (visual display) **20** providing one form of user output interface is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display may be of many types, e.g. employing liquid crystal or electroluminescent displays. The electronic display is in electrical communication with a local microprocessor mounted within the housing. A transceiver in electrical communication with the local microprocessor allows for the transmission and receipt of data from a wireless communications system connected to a central processor (not shown) in a manner known in the art. The electronic display is adapted to output information received from the local microprocessor, such as graphic or textual messages that ask the audience member to answer a question, provide an opinion, or convey other important information. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display. The visual display may be limited to presenting alphanumeric messages, but more preferably is capable of displaying graphical, pictorial, or slow-scan or fast-scan video input, preferably in real time. Keypad **50** accepts user input for transmission to the central processor.

In another aspect of the invention, the interactive device is optionally used by spectators to receive audible or video programming, which may be transmitted in the commercial AM or FM broadcast band or at any of a number of predetermined frequencies in the RF, VHF, UHF, or microwave frequency bands. The transmission may be analog or digital. Programming may also be transmitted optically, such as by modulation of an infrared emitting source located in

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the venue and received by a complementary photoreceptive element in the wireless interactive device and suitably processed for intelligible output. Optionally, the device also comprises means for receiving and displaying video signals such as from ordinary broadcast television stations. Transmission of such program content may be done via conventional commercial broadcast stations or with low power transmitters intended only to cover the immediate live event venue. Transmitters are optionally located either within the venue, in its environs, or in any other location that permits a sufficiently intense signal to be present in the venue. In a preferred embodiment device **10** incorporates circuitry to receive the aforementioned audio or video program content. The circuitry is adapted to receive the content and present it to the user. An earpiece **15** is preferably included to allow the user to listen to the audio content associated with the device without annoying neighboring fans. It is noted that other listening means could be employed such as earphones, speakers, or the like.

In other embodiments the aforesaid audio or video programming may be transmitted via any computer network to which the interactive device is connected, such as by streaming audio or video transmitted via the Internet, in accordance with presently employed protocols or other suitable protocols.

Such audio or video programming preferably comprises information or program content that is thematically related to the live spectator event or that provides content useful to the spectators at the event. The content may include descriptions of the action at the event, related expert commentary, or instant replays. The content optionally includes other information of interest to participants, such as news and traffic reports and weather conditions and forecasts desired by the patrons. Furthermore, the audio or video programming may include dissemination of questions or other matter incident to contests and polls conducted in accordance with the invention.

It is contemplated that special purpose devices such as the aforementioned interactive device **10** optionally be made available to those patrons who do not carry a conventional wireless device such as a cellular telephone, two-way pager, personal PC, or PDA. Units possessing the required wireless communications capability, electronic display, and user input and output interfaces are easily assembled using off the shelf components, such as transceivers, displays, keypads, and microprocessors, and other miscellaneous electronic components. These special devices would preferably be prepared for each event at one or more locations, having battery charging and menu programming capability, and transported to kiosks or otherwise made available near patron entry points in the venue. The kiosks would each be either sales locations or rental contract stations to secure deposit and payment terms (cash, credit/debit card, etc.), and patron seat location information for rental of the special devices to patrons prior to start of the event, and collection of the special devices after conclusion of the event. Optionally, such a device is provided to at least selected audience members as part of the price of admission or, alternatively, as an optional item rented or purchased by the audience member, and subsidized by the promotional messages.

In another aspect of the invention, wireless devices such as those routinely possessed and used by members of the public, are used for the aforementioned interactive communication. Preferably the wireless devices are selected from the group consisting of wireless personal digital assistants (PDA) and Pocket PC's; two-way pagers; and cellular telephones. Such devices normally incorporate input means

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such as keypads, selection buttons, and touch screens, and video and audio output means such as display screens, speakers, and earphones. The devices typically include circuitry, such as a local microprocessor, adapted to convert wireless input into forms presented by the output means and to accept user-entered input that is converted for wireless output in a manner known in the art. Many of these devices are also Internet-enabled, that is to say, able to send and receive textual or graphic data in protocols which are commonly associated with Internet technology and able to be processed suitably by routers, servers, and other ancillary equipment used in Internet communication. Additionally, such devices frequently have the capability of sending and receiving electronic mail and Internet-based instant messages which may be transmitted worldwide over the Internet. Suitable PDA's include wireless units sold under the PALM™ tradename by Palm Computing and under the BLACKBERRY™ tradename by Research in Motion. Wireless Pocket PC's sold, e.g. by Hewlett Packard, Compaq, and Dell are also suitable.

Known user-supplied wireless interactive devices are ordinarily equipped with either software or hardware features that provide a unique signature or identification of each device, e.g. the telephone number of a cellular telephone or the IP address of an Internet enabled device. The aforementioned special-purpose devices are also provided with unique identification. Both the special-purpose devices and the user-supplied general-purpose devices are adapted to transmit the unique signature for identification purposes. The present method preferably employs at least one unique signature of each wireless interactive device, whereby a given participating spectator's entries and responses may be individually attributed and tracked and the various interactive features described herein may be individually or collectively implemented. In addition, there is generally an electronic account associated with each user-supplied device for charges and credits. In some of the embodiments of the present invention, charges are levied for goods and services provided and transferred to the account associated with each device. Likewise, monetary credits, coupons, and the like can be disseminated either electronically to the account or by mail to an address associated with the account. In addition, it is preferred that information establishing each participating spectator's location within the live event venue also be associated with that user's device. The association can be effected in many ways. Preferably, a given user is provided with one or more identifying indicia that can be entered using the user input interface of the device and included in the unique signature transmitted by the device. For example, patrons may be provided with indicia distributed beforehand or upon request entered through the wireless device, e.g. through wireless connectivity to the Internet. Indicia may be provided by regular mail, e-mail, telephone text messaging, by connecting with an appointed Internet site, or any other suitable means. More preferably, each entrant's ticket bears unique identifying indicia and an attendee desiring to be a participating spectator enters the indicia using the user input interface of his/her wireless interactive device. In an even more preferred embodiment, each entry ticket bears both seat location information denoted in ordinary ways, such as by section, row, and seat numbers, and additional and unique predetermined confirmatory indicia, both of which are entered through the user input interface of the wireless device. The unique signature of each wireless interactive device contains coding corresponding to the seat location and/or the indicia. The entry of both codes provides an improved security feature, since

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unique signatures corresponding to entries with seat and confirmatory codes which do not match may be excluded as being invalid or possibly fraudulent. The foregoing features by which users are individually identifiable also permit the various services offered selectively to qualified, appropriate, or interested patrons or groups of patrons. Some wireless interactive devices further incorporate localization circuitry, whereby the device can be physically located.

As there are many suitable alternatives on which to base an embodiment of the current invention which are known to those skilled in the art, the specific interactive device and wireless communications technology used, the specific multiple access communication protocol used, and the specific client/server hardware interface and protocol are not important to the method of the invention so long as they support the required functions. What is important is the method of this invention by which the customer is provided better service.

A number of currently used communications protocols suitably provide connectivity between several of the aforementioned user devices and a wireless communications system. One presently preferred protocol is provided by the commercial cellular telephone network. Many wireless or cellular telephones currently operative with these networks incorporate provisions for sending and receiving textual messages and graphic images, and for exchanging electronic mail through the Internet. Improved capabilities for wirelessly transmitting slow and fast scan video are rapidly being developed and are useful in the practice of the present method. Current cellular telephone systems provide various forms of instant messaging capability also useful in transmitting and receiving the queries, advertisements, and the like used in the present method. Messaging in accordance with the Short Message Service (SMS) protocol is presently preferred, but other forms of messaging are also contemplated within the present invention.

The bilateral wireless communications used in the practice of the present method and system are preferably implemented using at least one transmission form selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions. Ultra-wide band and spread-spectrum transmission are especially promising technologies for the broadcasting of messages and transmission of spectators' responses. The multiplexing and frequency shifting inherently available in such technologies improve immunity to noise and interference and the security of data in transmission. For example, suitable techniques which may be used in the implementation of the present system are practiced in connection with cellular telephone systems, including such currently preferred methods as frequency division multiple access (FDMA), time division multiple access (TDMA), code division multiple access (CDMA), and global system for mobile communications (GSM) protocols, as well as other protocols including those defined by the International Telecommunications Union. Especially preferred are implementations of the present method compliant with interoperability standards promulgated by the Open Mobile Alliance and made available at the website www.openmobile.com and by the WAP Forum at the website www.wapforum.com. It is also preferred that access to the interactive features of the present invention be provided to customers of more than one provider of wireless services, including providers of cellular telephone service or of wireless access for PDAs and Pocket PCs. In some embodiments, such access for participating spectators employing wireless interactive devices served by a plurality of providers is provided by a

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wireless communications system wherein network connection of plural providers permits needed exchange of information, e.g. via the Internet. In other embodiments, the wireless communication system comprises one or more authorized providers of wireless service. Participating spectators employing wireless interactive devices served by another wireless service provider are furnished an access code, such as a telephone number and optionally further codes, or the like, permitting them to connect to one of said authorized providers, whereby they are enabled to participate in the present method, being afforded access to the various features described herein.

Another preferred communications protocol is specified by IEEE Standard No. 802.11, published by the Institute of Electrical and Electronics Engineers, and incorporated herein in the entirety by reference thereto. Standards in the IEEE 802.11 class (which are also known commonly as "Wi-Fi") specify a local area network system for wirelessly connecting individual devices such as PDA's and Pocket PC's to a local server through which the devices may communicate wirelessly, e.g. through a local intranet or the global Internet. Other wireless protocols that may be used to establish connectivity are also known, such as the Bluetooth Standard, published by the Bluetooth SIG and available through the website www.bluetooth.com, and incorporated herein in the entirety by reference thereto.

It will be understood by one skilled in the relevant art that different transmission modes and frequencies may be used by the wireless communications system for the transmissions to and from the wireless interactive device and that multiple transmission modes and frequencies may be used to accommodate interactive devices of different types simultaneously operated in the present system.

One representative embodiment of the present invention provides a method of enabling interactive participation by a plurality of spectators at a live event employing a wireless interactive device. The interactive participation enhances the enjoyment of such spectators at a live event transpiring at any form of entertainment venue.

The number of spectators constituting the plurality of spectator participants can vary depending on factors such as the size and nature of the live event, the prevalence of user-supplied wireless interactive devices, the availability of devices for sale or rent on-location, and the characteristics of the venue. At events with a very large number of spectators, e.g. the 50,000 to 100,000 or more fans that attend many major collegiate and professional sports games, a very small fraction of the participants suffices to provide statistically significant information characteristic of the entire crowd if the individuals are representative of the whole. For example, public opinion polls often rely on a sample as small as 500-1000 respondents to infer the views of the entire population of the United States. Accordingly, the term "plurality of spectators" as used herein, means a number of spectator participants varying from about 50 to as many as 100,000 or more. Preferably the number of spectator participants is at least about 1 percent of those persons present at the live event. Most preferably, the plurality of spectators ranges from about 25 percent to substantially all the spectators present at the live event. In some embodiments, the opportunity for spectators to participate in activities contemplated herein is extended to all those in attendance at the live spectator event who either provide a suitable wireless interactive device or purchase, rent, or are furnished a device at the event.

In a further embodiment, the method and system of the present invention are advantageously practiced in connection

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with live events that entail simultaneously-occurring but thematically-related activities in different, sometimes non-contiguous locations within an overall event venue, such as golf and tennis tournaments and the like. For example, a golf tournament ordinarily comprises staged play, wherein the competing golfers begin play at individually appointed times over an extended period, so that play is occurring simultaneously at each hole through most of the duration of the event. Important tennis tournaments such as the U.S. Open or Wimbledon are ordinarily played in a venue comprising plural courts on which matches occur simultaneously. During the Winter and Summer Olympics, competition occurs simultaneously in many sports, sometimes in widely scattered and sometimes non-contiguous locations. In such instances, it will be understood that the live event venue may comprise such non-contiguous locations. In each of these situations, the interactivity afforded by the present method provides a marked enhancement of the fan experience. The wireless interactive device of the invention allows spectators present at a location in which one of the activities is occurring to remain apprised of the progress of other activities, even those occurring in disparate locations.

In a step of the method, there is provided a wireless communication system adapted to transmit and receive messages with the wireless interactive devices used by the spectators. The wireless system is used to disseminate promotional messages to the spectators through the user output interface of the wireless device.

The wireless device employed in the present method preferably presents promotional messages or advertising from sponsors and/or advertisers. Monetary compensation for the presentation of such advertising material is optionally used to defray or underwrite the costs associated with practice of the present invention. Messages can be in the form of indicia **30** located (e.g., physically imprinted) on devices loaned, rented, or sold to spectators. Additionally, the messages can be visually displayed by the device or can be aurally communicated through the same. The messages can be in the form of preprogrammed or stored visual messages or recordings, but preferably are transmitted by the wireless communication system and presented live during the spectator event via open band lines. Visual advertising may be presented in discrete segments interspersed with program content or it may be incorporated substantially continuously into the overall image being presented at a given time, such as a banner ad.

In still another aspect of the present method, demographic information or characteristics of the users of wireless interactive devices are gathered and used in various ways. Users may be asked to enter information, such as their age or gender. Alternatively, such information may already be extant and available in databases, such as records of cellular telephone customers. Such information may be used to select which of a plurality of advertisements are most appropriate and likely to be of interest to a given user. The individual addressability of devices such as cellular telephones and wireless PDA's permits individually selected commercials to be presented to particular individuals or groups. Demographic information may also be used to tailor questions and limit contest participation to selected users. For example, in some embodiments participation in all or part of a survey or competition may be offered only to a restricted group, such as preferred corporate customers, patrons in selected classes of seats, season ticket holders, youths, or other defined groups. In addition, customer survey information is considered more useful by advertisers if the answers are categorized by the demographics of the

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respondents. All of these functions are easily implemented in the practice of the present method.

In an aspect of the invention, the present method may be used to conduct contests, games, and opinion polls of many types. Generally stated, such activities comprise the steps of: posing one or more questions to participating spectators; eliciting the participating spectators to enter an answer to the question using their wireless interactive devices; and processing the results. The questions may be posed using any communication form by which they can be effectively conveyed to participants. Preferably the questions are in a form that may be answered by selection of one of a relatively limited number of alternatives, such as a multiple-choice question or a rating scale. Answers may be entered using the user input interface. Preferably, the results are reported to at least the participating spectators, but they may also be furnished to sponsors, advertisers, or other interested parties.

Contests and games may include many different types of questions. At sporting events, questions may likely entail game strategy; evaluations of performance; predicted outcomes of upcoming plays or games; trivia questions about past or present players, teams, championships, and performance statistics; or the like. For example, at an athletic event such as a football game, the questions may relate to selection of a most valuable player or to game strategy, such as whether a running or passing play is preferred in a given field situation. At a golf tournament, participants might be asked to indicate which club a player ought to select to accomplish a given shot. Concertgoers might be asked to select a favorite song or artist from a number of choices presented or to choose songs to be performed during the concert. Civic events and political rallies might evoke questions about preferences of candidates for public office, opinions about civic issues, legislation, and public policies of many sorts. Participants may also be asked to rate goods or services, e.g. for quality, popularity, ease of use, or other desired characteristics. Other types of questions of more general nature and interest may also be used. Answers may be accepted for an extended period up to the full duration of the live event, but preferably are accepted during a limited, preselected time interval. Preferably, participants in the contests, games, or polls conducted in accordance with the invention are awarded prizes or other forms of consideration as inducement to participate. For example, one or more participating spectators who correctly answer contest questions or participate in games or opinion polls may be awarded a cash prize or credit. One preferred form for the delivery of such a credit is an electronic coupon that can be redeemed for any form of consideration, including concessions, merchandise, and/or other prizes available at the live event venue. For example, a message may be transmitted to a user's wireless device bearing a unique authentication code that could be verified by a vendor, such as through a cash register electronically linked to the central processor or order processing server, or by a telephone call to a preselected verification number. Alternatively, a printed coupon can be physically delivered to the participant based on the location of the user's interactive device by means of communication with the transceiver located therein or by other indication means, or delivered to a remote location by actual physical delivery by mail or the like, or by any form of electronic delivery. In still another alternative, either points or direct monetary credits are entered electronically into an account associated with a user, such as a user's credit or debit card, an account for the user's wireless device or Internet service provider, or by other like means known in ordinary commerce. For example, a user collecting sufficient points may redeem them for goods, services, or money.

In an implementation, the present method also comprises querying the spectators to respond with answers entered

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through the user input interface of the wireless device and transmitted therefrom using the wireless communication system. The answers received are transferred to a central processor for processing into results. It will be recognized that the accumulation of results may be done in the central processor or in one or more distributed receiving servers networked in data communication with the central processor by techniques well known in the computer art, such as by use of a local area network communicating over wire, wireless, or fiber optic communication links. Preferably, a stored computer program operative in either form of server accumulates and stores the incoming answers, at least temporarily, as spectator data. The results of processing the spectator data are also preferably stored, at least temporarily. At a suitable time, such as after the expiration of an announced deadline for participants to enter and transmit their responses to queries, the processed results are then announced to the spectators. Optionally prizes are awarded to participants who have entered an answer.

It will be understood that all of the aforementioned computing functions can be carried out by one or more general-purpose computer processors located either within the event venue or its environs, or at a remote location linked by any suitable data communications link using cable, fiber-optic, wireless, or other comparable transmission. The computing functions may be carried out by a single central processor, by linked distributed processors, or a combination thereof.

Queries can be promulgated to the spectators in many ways, including notice given by public address system announcements, visual displays on scoreboards, video monitors, or the like visible to the spectators, or by messages such as aural, textual, or graphic messages transmitted to the interactive units and then output to the spectator using the user output interface. In some implementations questions may be printed in event programs, flyers, newspapers, or the like. Optionally the queries are included in content provided by Internet portal sites to which the fans are connected. Questions may also be included in audio or video play-by-play descriptions, commentary, or announcements, or in other program content broadcast to the interactive units. Preferably, the questions are promulgated using at least one display visible to the participating spectators. More preferably, the visible display comprises large-scale displays, scoreboards, and/or monitors provided in the venue. After assimilation and processing of spectator responses, announcement of results may be given to the spectators by similar means.

Displaying the results of the processing of the spectator data is a step that generally follows the processing of the spectator data. This provides feedback to the spectators, for example showing them how their answers compared to those of other spectators.

In one embodiment, a display visible to a sizable number of spectators, such as large scoreboard or screen display 40, as depicted in FIG. 2, is used both for promulgating queries to participants and for announcing results. Any one or more large display devices capable of displaying a video, graphic, or alphanumeric image to a large number of spectators may be used, a JUMBOTRON® display being one suitable and preferred type. Alternatively, the display visible to the spectators comprises plural video monitors, preferably dispersed throughout the venue. For example, such monitors in the form of CRT displays, plasma screens, or other forms of video display devices may be provided in auxiliary areas of the live event venue or in private luxury box seating areas, such as those now commonly found at sports stadiums. Although FIG. 2 depicts the practice of the present method

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a football stadium, it will be understood that the present invention may also be practiced at any other type of live event venue.

The questions and results are optionally displayed on these monitors. A user input interface, such as keypad **50** on device **10**, allows an audience member to enter a response to queries. Examples of simple user input interfaces include a keypad, selection buttons, a touch screen, a rotatable dial, a pointing device such as a mouse or trackball, and a voice recognition system, but any other user interface by which the required input can be effected could be incorporated in the practice of the invention. A voice recognition system advantageously facilitates the use of the present system by visually impaired persons. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

In FIG. **2** there is depicted the practice of an embodiment of the invention. At least some of the spectators at an athletic event occurring in a large, outdoor stadium are provided with an interactive device **10** and **10'**. It will be understood that the interactive device may be an item provided by the spectator such as a cellular phone, or a wireless PDA or Pocket PC. Alternatively, suitable general- or special-purpose devices are made available at the spectator venue for purchase or rent or are given away without charge. In still other embodiments, the present system is operative both with user-provided devices and devices made available at the live event. The present inventor contemplates that only a portion of the spectators in attendance at an event may choose to participate, either by using a suitable interactive device they furnish or by obtaining a unit at the venue. In other embodiments of the invention up to substantially all of the patrons at a live event participate in accordance with the present method. FIG. **2** further depicts the users entering answers to a query using keypads available on their respective interactive devices and the display of answers on a large display board **40**. In addition to displaying results of the audience querying or contest, the material displayed on board **40** or dispersed video monitors optionally also includes promotional messages or advertising. For example, a given contest question might be sponsored by a business entity in return for including advertising for the entity's products or services during the querying and announcing associated with that contest.

The offering of prizes to one or more selected spectators who have responded to the querying, participated in the interactive games, or correctly answered quiz questions may be utilized to enhance the enjoyment of spectators, to encourage further participation in the querying and contest aspects of the present method, and to promote the sale of goods and services. Such prizes include goods and services of any form or discounts toward the purchase thereof. Items may be delivered directly to a winning patron either at the live event location or another preselected location. Alternatively, coupons redeemable for items or services at no cost or at a reduced cost may be delivered to the winning patron in person; by mail or similar delivery service; or transmitted electronically using a message to the patron's wireless interactive device or as an entry in an account of the patron, such as a credit or debit card account, a wireless service provider account, or the like. In a preferred embodiment, credits or coupons are transmitted to the winning patron in conjunction with billings for such an account of the patron.

The responses of the audience members are sent to a central processor (not shown) having a computer program stored and operative therein that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device **10** or a large screen display **40** remotely located from the fan. FIGS. **1** and **2**. The processed information could be a

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compilation or tabulation of similar responses, as either a number or a percentage of total responses, a graphical representation in a bar chart, pie chart or the like, or a combined graphical and numerical representation of the data. The processing further may include categorization of participants' responses according to demographic characteristics, which might include the age or gender of the participant or his/her preferred team loyalty.

In addition to prizes that can be won by participating in the contests and polls described above, a number of other incentives are optionally offered to spectators to induce them to participate in the interactive aspects of the present invention. In one aspect, access to a chat room and instant messaging are provided to select persons, who are preferably all live spectator event attendees. Participants may be enrolled by any suitable process. Preferably, a participating spectator enrolls by entering a predefined participant access code using the wireless interactive device. In some embodiments, the location indicia discussed hereinabove or similar, related indicia printed on a patron's entry ticket are used as the participant access code. Alternatively, prospective patrons may be provided with an access code beforehand, e.g. by regular mail, e-mail, or through an Internet site. Messages may be exchanged interactively among the participants using any suitable protocol, such as cellular telephone text messaging and known systems used for instant messaging between Internet enabled personal computers and Internet-enabled wireless telephones, PCs, and PDAs. Optionally, enrolled participants are offered the chance to receive one or more newsworthy instant messages from a message sponsor, such as one of the participating teams in an athletic event, during the course of the live event. For example, at a sporting event such messages might provide condition reports on injured players or information on game strategy from expert commentators or coaches. In some embodiments, the chat room and instant message features are provided at no cost, while in others, a fee might be charged by the offering entity for the services. Other services optionally provided to enrolled participants might include user-selectable, on-demand instant replays and commentary concerning the live event; and cellular telephone ring tones associated with a sports team or other identifiable entity.

Other incentives optionally offered to induce spectators to participate include monetary considerations, discounts, or coupons redeemable for at least part of the cost of goods or services. Such forms of consideration may be physically delivered to a participating spectator at the event venue or another location. Preferably, consideration is provided by electronic transfer using systems known in the art or as described elsewhere in this specification.

Still another incentive to participate is provided in implementations wherein food, beverages, goods, services, or the like can be ordered directly using the wireless interactive device. At virtually every live spectator event, food and beverages intended for consumption during the event and merchandise thematically associated in some manner with the event are sold at various locations of the live event venue and by roving vendors. For example at a sporting event, the items offered may include wearing apparel bearing team logos, trademarks, or other indicia associated with a team or its players; related memorabilia such as souvenirs, posters, photographs, and recordings; and sporting equipment. Items sold at a concert or dramatic performance might include wearing apparel bearing indicia associated with the show or particular performers, programs, recordings, photographs, posters, or the like. The term "promotional merchandise" is often used generically for items marked with such logos; trademarks; images of players, performers, and event venues, especially those considered historically significant; and

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similar indicia. Other general interest items, novelties, tickets for future events, and the like are also sold.

In an implementation, participating spectators use the wireless interactive device to place orders for the aforementioned goods and services. Advantageously, the interactive querying and contest aspects of the present method provide an impetus for users also to give attention to advertising that urges the purchase of goods and services. For example, such advertisements may interspersed with questions and contests, enhancing the likelihood that a patron will be motivated to make a purchase. In an embodiment, advertisements promoting the items are stored in a transaction server or recording system in data communication with the wireless communication system. Advertisements are selectively or generally transmitted by the wireless system for output by the user output interface of each interactive device.

The user enters an order for desired items or services using the user input interface, such as the keypad of a cellular telephone or PDA. In an implementation, the order is transmitted to the wireless communication system and routed to an order fulfillment server system. A computer program stored and operative therein receives the orders and communicates them to a provider of goods and services for order fulfillment. Physical goods, such as food and beverage, promotional merchandise items, and souvenirs may be delivered to the patron's seat, made available for pickup at a predetermined location within the live event venue, or shipped to another appointed location. In some embodiments, the wireless interactive device incorporates circuitry, such as global positioning system (GPS) technology, whereby the device may be localized sufficiently to allow the provider to determine a patron's physical location and thereby effect direct delivery of items to the patron. Alternatively, the user may enter a seat location either as part of the order entry process or at an earlier time, e.g. during enrollment in the aforementioned chat room and instant messaging services. Intangible items or services, such as tickets to future events or coupons redeemable for other items or for reduced prices, may be provided by similar forms of delivery or communicated electronically using known techniques. Optionally, a text message or other message confirming the order is returned to the purchaser for output using the wireless interactive device. Preferably, monetary consideration for purchased goods or services is provided by electronic transfer of funds between bank accounts or by charges billed to a user, such as to a user's conventional debit or credit card or wireless service provider account. Consummation of transactions using other forms of payment known for electronic processing may also be used and are to be considered within the scope of the method of the invention. In one embodiment, the present system is connected to an electronic financial network of a type known in the art. Transfer of funds from the network provides monetary consideration to the provider for the goods and services received by the ordering spectator.

In one embodiment, a menu of items available for purchase is transmitted upon the user's request to the interactive device. A hierarchical arrangement of a known sort including submenus may be used in situations wherein more items are available than can be accommodated within the confines of output displays of extant interactive devices. Preferably the items offered include at least food, drink, souvenir merchandise, and tickets for future events. In order to place an order, a user navigates using the input interface through the menus to select one or more items for purchase. The user may further enter location or other identifying indicia, such as a unique seat number or other reference number by which correct delivery may be effected. A credit card, bank account number, prepaid account number, or other similar reference by which money is electronically credited to the vendor in

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payment for the items ordered is also entered. Alternatively, any mechanism for effecting electronic payment known in the relevant art is used. As is well understood by those skilled in the art, even the limited hardware display and processing capacity of present cellular telephones, PDA's, and pagers is sufficient to accommodate the aforementioned menu and ordering method. However, as time moves on, much higher text densities, graphics, and even color will likely become commonplace in such devices and allow ever-increasing functionality to be provided and used in the method of this invention. As hierarchical menu systems have become ubiquitous with the advent of automated teller machines and windowed graphical user interfaces on modern personal computer operating systems, the concept and the method of their use are familiar to many persons and will not be further described here.

The use of electronic ordering and payment facilitates sales made in accordance with the present method. Items can be ordered by patrons from their seats at any time and timely delivered, without the need to wait for the unpredictable arrival of a roving vendor who may not even be carrying the item desired. Food and beverage items carried by the roving vendor are often not maintained at a temperature that is pleasing to the patron, i.e. cold items have warmed up and hot items have cooled excessively. The confusion of having to communicate an order in the often-noisy environment of a sports stadium is eliminated, as is the inconvenience of passing money in payment and change, possibly across many patrons between the customer and the closest aisleway. In addition to use of common credit and debit cards as means of payment, corporate accounts and billing through third party accounts such as the customer's Internet service provider or cellular telephone service provider are readily effected in a transaction processed in accordance with the present method.

In addition, other services are optionally offered, such as restaurant, lodging and transportation reservations, biographical and recording data for athletes, concert artists, and other performers, future schedules of events, and myriad other information. This information can be conveyed visually, audibly, or via a combination of both media forms. The offerings presented through the wireless interactive device may be complemented by messages simultaneously displayed on scoreboards or the like to enhance their ability to garner the audience's attention.

Yet another aspect of the invention allows participating spectators to interactively participate in auctions, which may be of any type commonly known, including conventional auctions wherein items are sold to the lowest bidder; Dutch auctions, in which one or more items are offered at a fixed price to the first bidder or preselected maximum number of bidders; a reverse auction, in which the price of an item is lowered in response to a large number of bids received; and other forms. The goods or services offered in such auctions preferably are related thematically to the live spectator event but may also include any goods or services of interest to the participants. The auctions are conducted by disseminating a description of the goods or services offered to the participating spectators through one or more of the modes discussed hereinabove for the dissemination of the contest queries of the invention. Participating spectators enter their bids or related responses by using the user input interface of their wireless interactive devices. Such auctions conducted at a live spectator event in accordance with the invention beneficially evoke a high level of interest due to the level of enthusiasm and excitement typically evident at a live event.

Preferably, the opportunity to participate in the various interactive features of the present method and system, along with eligibility for the various prizes and other incentives, are offered to substantially all the persons at the live spec-

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tator event. However, participation in some or all features may be limited to some subset of the persons physically present at the event.

FIG. 3 depicts one implementation of the system 100 of the invention. A wireless communications system 105 provides service to cellular telephones, wireless PDA's, and Pocket PC's. Wireless interactive devices used with the system are a plurality of cellular telephones 110 and served by cellular telephone provider 112 through signals transmitted and received at antenna 114. Wireless PDA's 116 are served by wireless PDA service provider 118 through signals transmitted and received at antenna 120. A wireless local area network 122 transmitting signals in accordance with IEEE Standard 802.11 from antenna 124 serves wireless Pocket PC's 126. Each of cellular telephone provider 112, wireless PDA service provider 118, and wireless local area network 122 communicates through the Internet 128. Promotional message server 130 selects promotional messages which are transmitted via the Internet to wireless communications system 105, and broadcast to interactive devices 110, 116, and 126. Promotional messages are also transmitted to stadium display 132, which includes a controller operative to receive digital information, e.g. information received via the Internet, and convert it into corresponding textual, graphic, or video displays for presentation. Central processor 134 provides queries displayed on display 132. Answers to such queries are entered on the user input interfaces of interactive devices 110, 116, and 126 and received by distributed receiving servers (not shown) maintained by each of cellular telephone provider 112, wireless PDA service provider 118, and wireless local area network 122. The distributed receiving servers accumulate the answers and transfer them by Internet to central processor 134 for processing into results, which are then communicated and displayed by display 132. Order processing server 136 receives orders for goods and services entered by spectators using their wireless interactive devices and communicates those orders to one or more providers 138 of goods and services, such as food/beverage vendors. Connection 140 to electronic financial network 142 enables the electronic transmission to providers 138 of monetary consideration for the goods and services they furnish. It will be understood by those skilled in the relevant art that the functions of the plural servers alternatively may be shared among a smaller number of servers or may be accomplished by central processor 134. The plural servers also may be in data communications via the Internet or a local network implemented using connections by wire, wireless, or optical data transmission, in any way conventional in the art. Other networking protocols suitable for the interchange of digital information may also be used.

Having thus described the invention in rather full detail, it will be understood that such detail need not be strictly adhered to, but that additional changes and modifications may suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What is claimed is:

1. A method for enabling interactive participation at a live spectator event held at a live event venue and attended by a plurality of persons at said venue, at least a portion of said persons being participating spectators employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface, the method comprising the steps of:

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providing a wireless communication system adapted to transmit and receive messages with said interactive device;

querying said participating spectators to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device;

receiving answers entered by said participating spectators;

transferring said answers to a central processor;

processing said answers into results using said central processor; and

announcing said results at said live event venue.

2. A method as recited by claim 1, further comprising the step of disseminating at least one promotional message to said participating spectators.

3. A method as recited by claim 2, wherein said promotional message is disseminated for monetary consideration from an advertiser.

4. A method as recited by claim 1, wherein a unique signature is associated with each of said wireless interactive devices and adapted to be transmitted therefrom.

5. A method as recited by claim 4, wherein said unique signature comprises indicia entered into said wireless interactive devices using the user input interface thereof.

6. A method as recited by claim 5, further comprising the step of providing an entry ticket to each of said persons for entry to said live spectator event, said entry ticket bearing unique identifying indicia appointed to be entered into said interactive device, and said unique signature contains coding corresponding to said indicia.

7. A method as recited by claim 5, wherein said live event venue has individual seat locations, each identified by a seat location, and said method further comprises the step of providing an entry ticket to each of said persons for entry to said live spectator event, said entry ticket bearing of one of said seat locations and further identifying indicia, the seat location and indicia being appointed to be entered into said interactive device, and said unique signature contains information corresponding to said seat location and indicia.

8. A method as recited by claim 4, further comprising the step of conducting an auction of goods or services, wherein participating spectators submit bids entered using said user input interface.

9. A method as recited by claim 4, further comprising the steps of soliciting a purchase of goods or services by said participating spectators; accepting orders for said purchase entered by said participating spectators using said user input interface, transmitted by said interactive device; and submitting said orders to a vendor for fulfillment for monetary consideration.

10. A method as recited by claim 4, wherein said goods comprise at least one item of food, beverage, and promotional merchandise.

11. A method as recited by claim 9, wherein said goods or services are delivered using a unique signature to locate said participating spectators in said live event venue.

12. A method as recited by claim 9, wherein said interactive device further comprises localization circuitry and transmits a position obtained from said localization circuitry and indicia identifying said device, and said position and indicia are used to effect delivery of goods to said participating spectator.

13. A method as recited by claim 1, further comprising collecting demographic characteristics of at least a portion of said participating spectators.

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14. A method as recited by claim 1, wherein said promotional message is selected based on said demographic characteristics of said participating spectator.

15. A method as recited by claim 1, further comprising the step of offering at least one incentive to induce said persons to become said participating spectators during said live spectator event.

16. A method as recited by claim 15, wherein said incentive comprises the dissemination of at least one instant message to said participating spectators during said live spectator event.

17. A method as recited by claim 15, wherein said incentive comprises a chat room in which participation is limited to said participating spectators.

18. A method as recited by claim 15, wherein said incentive comprises conveying to said participating spectator at least one of goods, services, or coupons redeemable for at least part of the price of goods or services.

19. A method as recited by claim 15, wherein said incentive comprises electronic transfer of consideration to said participating spectator.

20. A method as recited by claim 1, further comprising the step of relaying informational items, said items being transmitted by said wireless communication system to said wireless interactive device for output using said user output interface.

21. A method as recited by claim 20, wherein said informational items contain event-related content.

22. A method as recited by claim 20, wherein said informational items comprise items selected from the group consisting of news reports, traffic condition reports, weather conditions, weather forecasts, sports news and scores,

23. A method as recited by claim 1, wherein said querying comprises a contest.

24. A method as recited by claim 1, wherein said querying comprises a game.

25. A method as recited by claim 1, wherein said querying comprises an opinion poll.

26. A method as recited by claim 1, further comprising the step of awarding a prize to at least one of said participating spectators who has entered an answer in response to said querying.

27. A method as recited by claim 26, wherein said prize is delivered to said participating spectator.

28. A method as recited by claim 26, wherein said prize is transferred electronically to said participating spectator.

29. A method as recited by claim 1, wherein said querying is limited to a portion of said participating spectators.

30. A method as recited by claim 1, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

31. A method as recited by claim 1, wherein said interactive device is a member selected from the group consisting of cellular telephones, two-way pagers, wireless personal digital assistants, and wireless pocket PC's.

32. A method as recited by claim 1, wherein said wireless interactive device is Internet-enabled and at least a portion of the communications to and from said wireless interactive device is accomplished using the Internet.

33. A method as recited by claim 1, wherein said user input interface comprises a plurality of keys.

34. A method as recited by claim 1, wherein said user input interface comprises at least one member selected from

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the group consisting of a keypad, selection buttons, a touch screen, a pointing device, a rotatable dial, and a voice recognition system.

35. A method as recited by claim 1, wherein said user output interface comprises at least one of an alphanumeric text display, a graphical display, and an audio output means.

36. A method as recited by claim 1, wherein said querying step is accomplished by at least one display visible to said participating spectators.

37. A method as recited by claim 36, wherein said display comprises at least one of a scoreboard and a large-scale video display.

38. A method as recited by claim 36, wherein said live event venue includes at least one auxiliary area and said display is visible in said auxiliary area.

39. A method as recited by claim 1, wherein said querying step is accomplished by a notice audible to said participating spectators.

40. A method as recited by claim 1, wherein said querying step is accomplished by a message transmitted by said wireless communication system to said interactive device and output by said user output interface.

41. A method as recited by claim 1, further comprising the step of announcing said results.

42. A method as recited by claim 41, wherein said announcing step is accomplished by a notice audible to said participating spectators.

43. A method as recited by claim 41, wherein said announcing step is accomplished by at least one display visible to said participating spectators.

44. A method as recited by claim 41, wherein said announcing step is accomplished by a message transmitted by said wireless communication system to said interactive devices and output by said user output interface.

45. A method as recited by claim 1, further comprising the step of offering of a special-purpose wireless interactive devices for sale or rent to said persons.

46. A method as recited by claim 1, wherein said live spectator event comprises multiple activities occurring simultaneously in different locations within a venue.

47. A method as recited by claim 1, wherein said wireless interactive system comprises plural providers of wireless services, said providers being connected for the exchange of information.

48. A method as recited by claim 1, wherein said wireless communications system comprises wireless service provided by one or more authorized providers, and at least a portion of said participating spectators employ wireless interactive devices serviced by other providers and are furnished with an access code permitting them to connect to one of said authorized providers, whereby said participating spectators are enabled to participate in the present method.

49. A method for enabling interactive participation at a live sporting event held at a live event venue and attended by a plurality of persons at said venue, at least a portion of said persons being participating spectators employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface, the method comprising the steps of:

providing a wireless communication system adapted to transmit and receive messages with said interactive device;

querying said participating spectators to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device;

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receiving answers entered by said participating spectators;
transferring said answers to a central processor;
processing said answers into results using said central processor; and
announcing said results at said live event venue.

50. A system for enabling interactive participation at a live spectator event held at a live event venue and attended by a plurality of persons at said venue, at least a portion of said persons being participating spectators employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface, the system comprising:

a wireless communication means for transmitting and receiving messages with said interactive device;

means for querying said participating spectators to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device;

means for processing into results said answers entered by said participating spectators, received by said wireless communications system, and transferred to said central processor; and

means for announcing said results at said live event venue.

51. A system as recited by claim 50, wherein said wireless communications means comprises at least one wireless system operated by a wireless service provider.

52. A system as recited by claim 51, wherein said wireless interactive device is a member selected from the group consisting of cellular telephones, wireless personal digital assistants, wireless pocket PC's, and two-way pagers, said member being provided wireless access by said wireless service provider.

53. A system as recited by claim 50, further comprising means for disseminating at least one promotional message to said participating spectators through said user output interface of said interactive device.

54. A system as recited by claim 50, wherein said wireless interactive device further comprises localization circuitry and transmits its position obtained from said localization circuitry.

55. A system as recited by claim 50, wherein said disseminating means comprises a promotional message server in data communication with said wireless communications system, said promotional message server providing said at least one promotional message from a plurality of messages stored in said promotional message server and sending said promotional message to said wireless interactive device through said wireless communications system.

56. A system as recited by claim 55, wherein said promotional message server employs demographic characteristics of said participating spectators in selecting said promotional message.

57. A system as recited by claim 50, wherein said querying means comprises at least one display visible to said participating spectators.

58. A system as recited by claim 50, wherein said announcing means comprises at least one display visible to said participating spectators.

59. A system as recited by claim 50, further comprising at least one prize appointed to be awarded to at least one of said participating spectators.

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60. A system as recited by claim 50, further comprising an order processing server in data communication with said wireless communications means, said order processing server receiving orders for goods and services entered by said participating spectators using said user input interface and communicating said orders to a provider of goods and services for order fulfillment.

61. A system as recited by claim 50, wherein said wireless interactive device is Internet enabled and communicates therewith.

62. A system as recited by claim 50, wherein said wireless interactive device incorporates circuitry for receiving broadcast informational items and said system further comprises a broadcasting system broadcasting said informational items appointed to be received by said wireless interactive device.

63. A system as recited by claim 50, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

64. A system as recited by claim 50, wherein said user output interface bears at least one of said query directed to said participating spectators and said results.

65. A system as recited by claim 50, wherein said means for processing comprises a central processor including at least one general-purpose computer.

66. A system as recited by claim 65, further comprising at least one distributed receiving server in data communication with said central processor and said wireless communications system, and wherein a computer program stored in said receiving server receives said answers and transfers said answers to said central processor.

67. A system as recited by claim 65, wherein a computer program stored in said central processor is operative to process into results said answers entered by said participating spectators.

68. A system as recited by claim 65, further comprising an order fulfillment server in data communication with said central processor, and wherein a computer program stored in said order fulfillment server receives orders for goods and services placed by said participating spectators and communicates said orders to a provider of said goods and services.

69. A system as recited by claim 68, further comprising a connection to an electronic financial network by which monetary consideration is received for said goods and services provided to said participating spectator by said provider.

70. A system as recited by claim 50, further comprising at least one visible display bearing at least one of said query directed to said participating spectators and said results.

71. A system as recited by claim 70, wherein said visible display comprises a plurality of video monitors dispersed throughout said venue.

72. A system as recited by claim 70, wherein said visible display comprises a scoreboard visible to the participating spectators in said venue.

73. A system as recited by claim 70, wherein said visible display comprises a large screen display visible to the participating spectators in said venue.

* * * * *

EXHIBIT 13



US007123930B2

(12) **United States Patent**
Inselberg

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(45) **Date of Patent:** ***Oct. 17, 2006**

(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE SPECTATOR EVENT**

(76) Inventor: **Eric Inselberg**, P.O. Box 833, Short Hills, NJ (US) 07078

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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See application file for complete search history.

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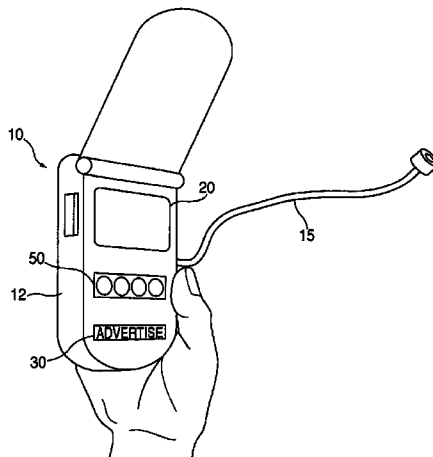
Primary Examiner—Jean Gelin

(74) *Attorney, Agent, or Firm*—Ernest D. Buff & Associates, LLC; Ernest D. Buff; Gordon E. Fish

(57) **ABSTRACT**

The present invention relates to a method for providing interactive audience participation at live spectator events. The method includes providing spectators with an interactive device that presents a promotional message and includes a user interface, broadcasting audio programming to the spectator through the interactive device, querying the spectators, wherein answers to the querying may be entered by spectators via the user interface of the interactive device, transmitting the answers to a central processor, storing the answers as spectator data, processing the spectator data into results, storing the results of the processing of the spectator data and broadcasting the results of the processing of the spectator data.

41 Claims, 2 Drawing Sheets



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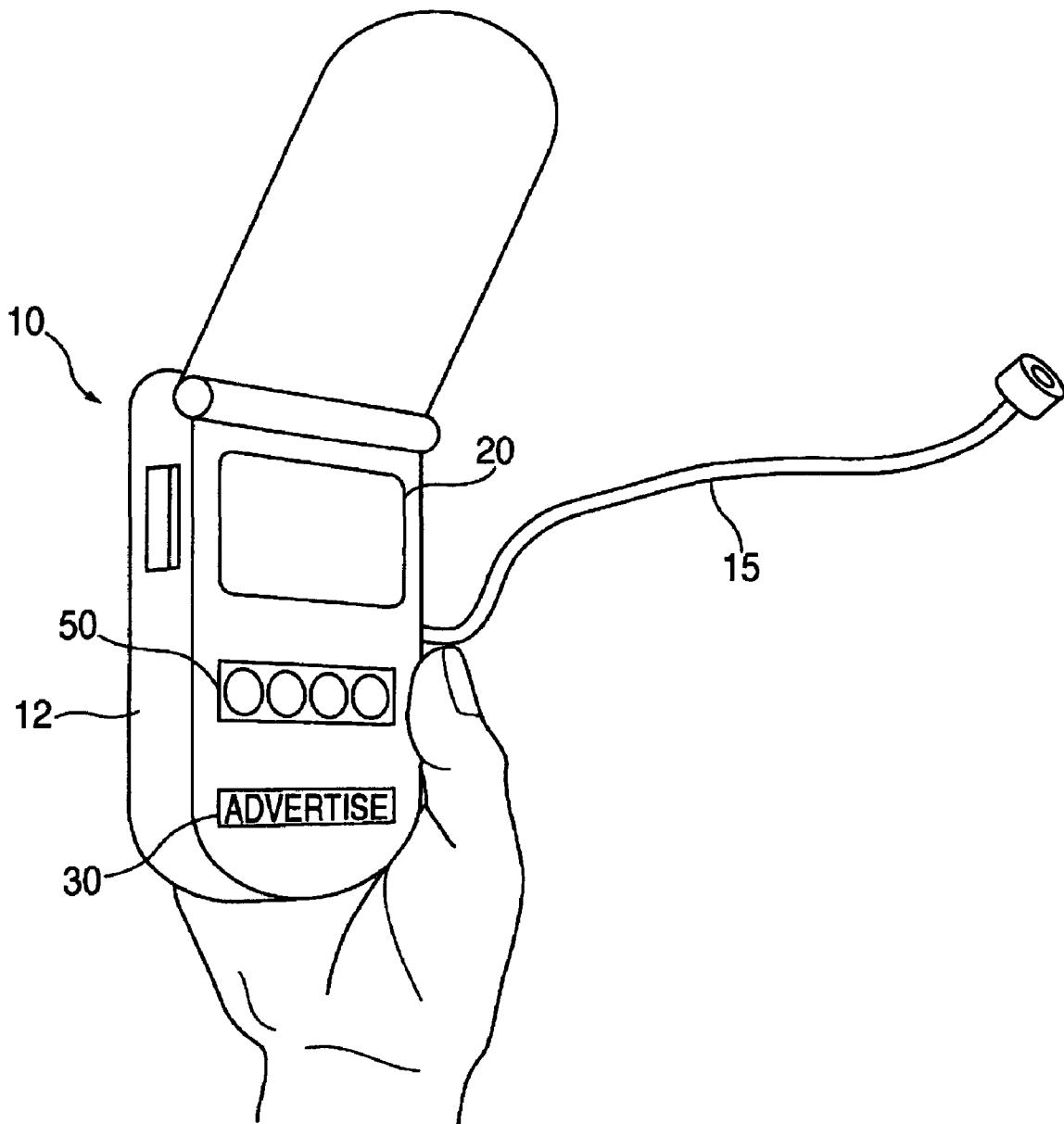


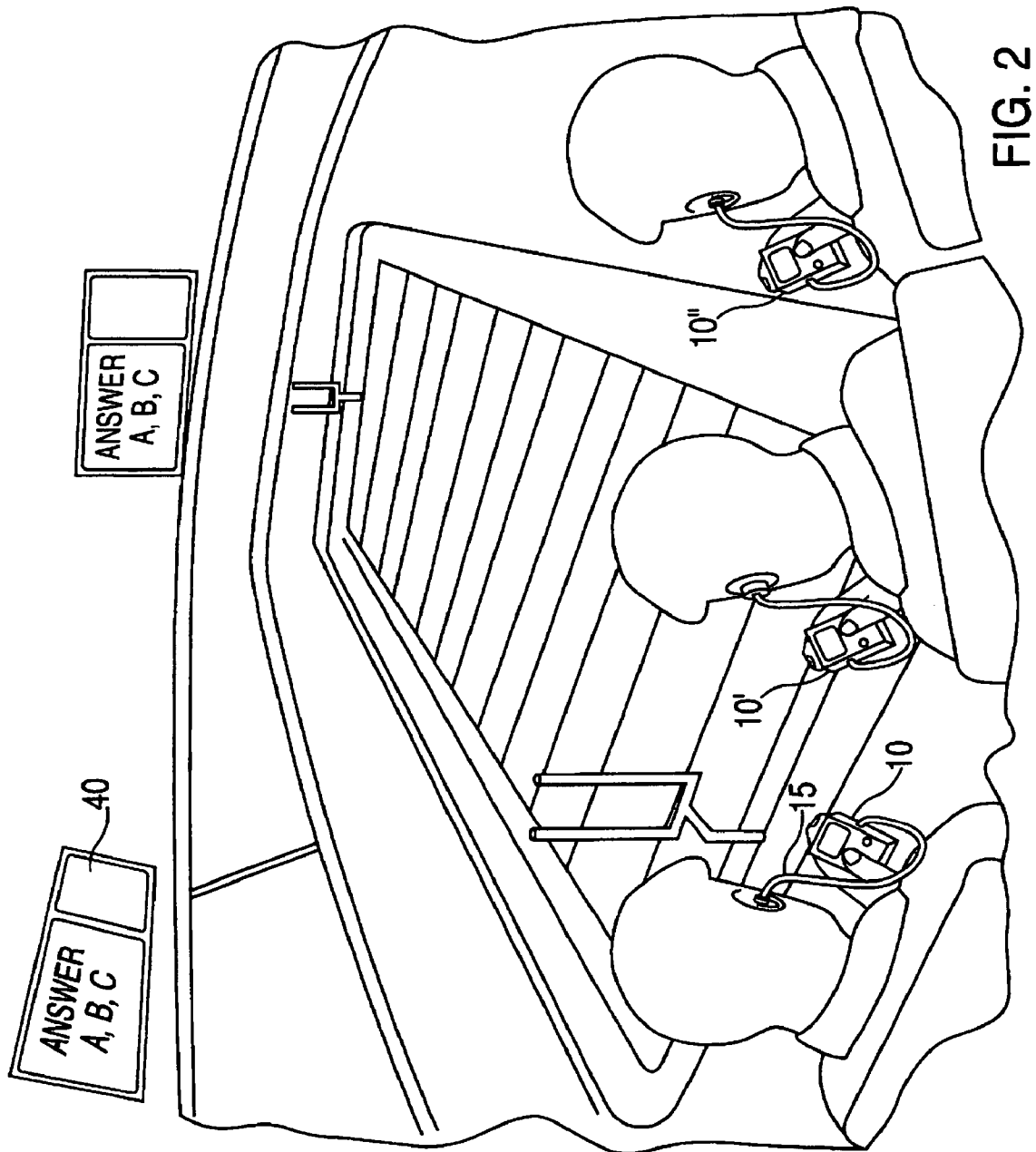
FIG. 1

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METHOD AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE SPECTATOR EVENT

RELATED U.S. APPLICATION DATA

This application is a continuation of applicant's U.S. patent application Ser. No. 10/661,871, filed Sep. 12, 2003 now U.S. Pat. No. 6,975,878 which, in turn, is a continuation of applicant's U.S. patent application Ser. No. 09/854,267, filed May 11, 2001, now U.S. Pat. No. 6,650,903 which, in turn, is a continuation of applicant's U.S. patent application Ser. No. 09/656,096, filed Sep. 6, 2000, now U.S. Pat. No. 6,434,398.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a method for interactive audience participation at a live spectator event. The invention also relates to an apparatus that is used in connection with such method.

2. Description of the Prior Art

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live spectator events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON™. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live spectator events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a sports team. Accordingly, in order to continue attracting live audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and expressing

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one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally, fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often-heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, sometimes the seat location of the attendee fails to offer an unobstructed view. On other occasions a technical ruling may be made by a game official that is not fully explained to those in attendance but is fully analyzed by television and/or radio announcers.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of audience members at live spectator events by more fully involving the audience. In a preferred embodiment of the invention, the method of enhancing audience participation comprises communicating information to fans at a sporting event using an interactive device that allows fans to respond to displayed messages. Individual fan feedback is stored, processed (e.g., tabulated) and displayed back to the individual fan or the audience as a whole. The interactive device is preferably a wireless, hand held device, which includes an audio component to allow the user to listen to play-by-play and expert commentary during the live event. The audio component may also provide spectators with other desirable information such as traffic and weather reports. Since the device is easily transported, the fan can carry it on trips to the concession stands or to the restrooms. Further, the method presents promotional messages of sponsors and advertisers to each user of the interactive device. The promotional message may be permanently affixed to the device and/or transmitted to each device via open band lines. In a more specific method, the location of individual fans is identified by means of a transceiver located within the interactive device.

The method can be used to conduct contests wherein a fan is asked to predict the next event or events to take place (e.g. the outcome of the next at bat in a baseball game or the next play or plays to be called in a football game on a real time basis, all star balloting, pitching changes, etc.). Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the fan selects from a list of promptings and/or possible answers. A fan that correctly predicts a predetermined number of outcomes may be awarded an electronic coupon that can be redeemed for concessions and/or other prizes. Alternatively, the prize could be delivered to the fan based on the location of the fan's interactive device by means of communication with the transceiver located therein.

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One advantage of the invention is that promotional messages and advertisements receive a higher degree of attention from fans, because the fans are more interested in the interactive content than in passively viewing or listening to broadcast messages.

Another advantage of the invention is that it is possible to receive instantaneous and correlated feedback from a large number of fans, which is valuable information for, by way of example, sponsors, teams and leagues.

A further advantage of the invention is that fans value the expert commentary, freedom of movement and the interactivity afforded by the method, increasing their enjoyment and the perceived value of attending a live sporting event.

Other objects, features and advantages of the invention will be readily apparent from the following detailed description of a preferred embodiment thereof taken in conjunction with the drawings.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood and further advantages will become apparent when reference is had to the following detailed description of the preferred embodiments of the invention and the accompanying drawings, wherein like reference numeral denote similar elements throughout the several views and in which:

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of hand held device used in connection with the interactive audience participation system of the present invention.

FIG. 2 is a schematic diagram of audience members at a spectator event utilizing the interactive audience participation system of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

Referring now to the drawings in detail wherein like reference numerals have been used throughout the various figures to designate like elements, there is shown in FIG. 1 a hand held, interactive device 10 adapted for use in connection with the interactive audience participation system of the present invention.

The device is preferably provided to audience members at a live spectator event as shown in FIG. 2. The device is adapted to provide information to the user. In a preferred embodiment the device 10 includes a housing 12 with an electronic display opening. The device 10 preferably includes a multiband radio incorporated therein with an audio receiving circuit and an audio output means (not shown). The audio output means is in electrical communication with the audio receiving circuit in a manner known in the art. The radio is adapted to receive AM, FM and/or VHF signals from a number of predetermined frequencies.

An earpiece 15 is included to allow the user to listen to the radio associated with the device without annoying neighboring fans. It is noted that other listening means could be employed such as earphones and the like.

An electronic display (visual display) 20 is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display is in electrical communication with a local microprocessor mounted within the housing. A transceiver in electrical

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communication with the local microprocessor allows for the transmission and receipt of data from a central processor (not shown) in a manner known in the art. The electronic display is adapted to display data received from the local microprocessor. For example, the visual display is adapted to display messages that ask the audience member to answer a question or provide an opinion. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display.

The device 10 preferably presents promotional messages from sponsors and/or advertisers, essentially underwriting the cost of a user interface device. Such messages can be in the form of indicia 30 located (e.g., physically imprinted) on the device. Additionally, the messages can be visually displayed on the visual display 20 of the device or can be aurally communicated through the same. The messages can be in the form of pre-programmed visual messages or recordings or can be transmitted live during the spectator event via open band lines. The device is preferably provided to each audience member as part of the price of admission or, alternatively, as an optional item purchased by the audience member, and subsidized by the promotional messages.

In one embodiment, a large screen display 30, as depicted in FIG. 2, remotely located from the fan (e.g., a JUMBOTRON™ display) is used for querying users of the interactive device. A user interface 50 on the device 10 allows an audience member to enter a response to queries. Examples of simple user interfaces are a keypad, selection buttons, touch screen, rotatable dial or voice recognition, but any other user interface could be incorporated within the invention. In an alternate embodiment, the user interface device is adapted to interact with other fans by allowing for the broadcasting of messages to all audience members or, alternatively, from one individual audience member to another. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

The responses of the audience members are sent to a central processor (not shown) that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device 10 or a large screen display 40 remotely located from the fan. FIGS. 1 and 2. The processed information could be a compilation of the number of similar responses or as a percentage of total responses or graphically in a bar chart, pie chart or some other graphical, numerical or combined graphical and numerical representation of the data.

One representative embodiment of the present invention is a method of enhancing the enjoyment of spectators at live entertainment venues.

In the first step of the method, spectators are provided with an interactive device 10, 10' and 10". FIG. 2. The interactive device may be any device which permits broadcast of audio or video or both audio and video and provides the spectator with a user interface for sending replies to queries. The interactive device is adapted to present promotional messages either by placing the same on the device or by visually or aurally transmitting messages through the same.

Optionally, the device could be used to send messages to another fan, group of fans or all fans. This feature could be enabled in a manner similar to email by having a unique address programmed in each device. Optionally, the users could be queried to input a section and seat number. Inputting a seat number has the additional benefit of allowing delivery of awards, incentives and prizes directly to the

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spectator's seat. Another way to deliver prizes to spectators would be completely electronic. An award could be sent electronically to the unique address programmed in the interactive device, which could then be redeemed at either a central location or at one of the concession stands. This could be done without entering a seat number.

Another step involves broadcasting audible programming to spectators, using the interactive device. This is accomplished by incorporating an audio receiving circuit within the device which is adapted to receive RF and/or VHF signals at predetermined frequencies.

Querying of spectators, wherein answers may be entered by spectators using their interactive devices, is yet another step of the method.

Transmitting the answers from the spectators to a receiver or receivers is the next step in the method followed by receiving the answers, either at a central processing station or at distributed processing stations.

Storing the answers, at least temporarily, as spectator data, and processing the spectator data are additional steps in the method. This is followed by storing the results of the processing of the spectator data, at least temporarily.

Displaying the results of the processing of the spectator data is a step that generally follows the processing of the spectator data. This provides feedback to the spectators, showing them how their answers compared to other spectators. The steps of querying, transmitting, receiving, storing and displaying may all be accomplished via technology known in the art. Additionally, the steps of querying and transmitting are preferably achieved using wireless communications known in the art. The wireless communications are preferably selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions.

The offering of prizes to a selected spectator or spectators who have responded to the querying, participated in the interactive games or answered correctly quiz questions may be utilized to enhance the enjoyment of spectators.

Another optional embodiment of the method allows for wireless transmitting of the answers and/or responses to the querying.

Ultra-wide band transmission is a promising technology for the broadcasting of messages and transmission of spectators' responses. It has the advantage of multiplexing over a single frequency.

It is contemplated that the step of displaying the results may be achieved by using a stadium large screen display. Alternatively, the step of displaying the results may be achieved using a stadium monitor system or using a display incorporated in the interactive device or such information may be broadcast as audibly or both audibly and visibly.

The present invention may be embodied in other forms without departing from the spirit or essential attributes thereof and accordingly reference should be made to the claims rather than to the foregoing specification as indicating the scope thereof.

What is claimed is:

1. A system for enabling interactive participation by spectators attending a live spectator event at a venue and employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user interface, and (iii) display messages on an electronic display, the system comprising:

a wireless communication system adapted to transmit and receive messages with the interactive device;

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means for querying the spectators to respond to at least one query with answers entered through the user interface and transmitted by the interactive device;

means for receiving the answers at a central processing station or distributed processing stations;

means for storing the received answers as spectator data; a central processor adapted to receive and process the spectator data into results; and

means for announcing the results to the spectators attending the live spectator event.

2. The system of claim 1, further comprising means for disseminating least one promotional message to the spectators through the electronic display.

3. The system of claim 1, wherein the querying means comprises at least one large screen display visible to the spectators in the venue.

4. The system of claim 1, wherein the announcing means comprises at least one large screen display visible to the spectators in the venue.

5. The system of claim 1, further comprising at least one prize appointed to be awarded to at least one of the spectators.

6. The system of claim 1, wherein the wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, and satellite transmission.

7. The system of claim 1, further comprising means for broadcasting messages from the interactive device of one of the participating spectators to the interactive device of another of the participating spectators.

8. The system of claim 1, wherein each of the interactive devices has a unique address programmed therein.

9. The system of claim 1, further comprising means for providing audio transmission of audible programming to the interactive devices, the audible programming comprising at least one of play-by-play, expert commentary, traffic reports, and weather reports.

10. A method for interactive audience participation at a live spectator event attended by a plurality of participating spectators employing a purchased, hand-held, wireless interactive device that includes a user interface, the method comprising the steps of:

querying the participating spectators, wherein answers to the querying may be entered by the participating spectators via the user interface of the interactive device; transmitting the answers to a central processor; storing the answers as spectator data; processing the spectator data into results; storing the results of the processing of the spectator data; and

broadcasting the results of the processing of the spectator data to the plurality of participating spectators attending the live spectator event.

11. The method of claim 10, wherein the wireless interactive device employs a form of wireless communications selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions.

12. The method of claim 10, further comprising the step of presenting a promotional message to each participating spectator.

13. The method of claim 12, wherein the presenting step is accomplished by locating an indicia on the interactive device.

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14. The method of claim 13, wherein the promotional message is imprinted on the device.

15. The method of claim 12, wherein the promotional message is transmitted wirelessly to the interactive device and is presented to the participating spectator either visually or aurally. 5

16. The method of claim 12, wherein the promotional message is pre-programmed in the interactive device.

17. The method of claim 10, further comprising the step of awarding prizes to at least one selected spectator who has answered the querying. 10

18. The method of claim 17, wherein the awarding of prizes is accomplished by electronic delivery.

19. The method of claim 17, wherein the awarding of prizes is accomplished by direct delivery to the at least one selected spectator. 15

20. The method of claim 10, wherein the interactive device is adapted to allow the broadcasting of messages from one of the participating spectators to another of the participating spectators. 20

21. The method of claim 10, wherein each interactive device has a unique address programmed therein.

22. The method of claim 10, wherein the answers are received at a central processing station and thereafter transmitted to the central processor. 25

23. The method of claim 10, wherein the answers are received at distributed processing stations and thereafter transmitted to the central processor.

24. The method of claim 10, wherein the live spectator event is a sporting event. 30

25. The method of claim 10, wherein the live spectator event is conducted at a live entertainment venue.

26. The method of claim 10 wherein the step of querying is achieved using a large screen display.

27. The method of claim 10, wherein the step of querying is achieved using the interactive device. 35

28. The method of claim 10 wherein the step of broadcasting is achieved using a large screen display.

29. The method of claim 10, wherein the step of broadcasting is achieved using the interactive device. 40

30. A method for interactive audience participation at a live event attended by spectators, a plurality of whom have a wireless interactive device including a user interface, the method comprising the steps of:

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querying the spectators, wherein answers to the querying may be entered via the user interface of the interactive device;

transmitting the answers to a central processor;

storing the answers as spectator data;

processing the spectator data into results;

storing the results of the processing of the spectator data; and

broadcasting the results of the processing of the spectator data to the spectators attending the live event.

31. The method of claim 30, further comprising the step of awarding prizes to at least one selected spectator who has answered the querying.

32. The method of claim 30, further comprising the step of presenting a promotional message.

33. The method of claim 30 wherein the wireless interactive device employs a form of wireless communications selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions.

34. The method of claim 30 wherein the step of querying is achieved using a large screen display.

35. The method of claim 30, wherein the step of querying is achieved using the interactive device. 25

36. The method of claim 30 wherein the step of broadcasting the results is achieved using the large screen display.

37. The method of claim 30 wherein the step of broadcasting the results is achieved using the interactive device.

38. The method of claim 30, wherein the live spectator event is a sporting event. 30

39. The method of claim 30, wherein the live spectator event is conducted at a live entertainment venue.

40. The method of claim 30, wherein the interactive device further comprises an audio receiving circuit for receiving an audio signal at a predetermined frequency and the method further comprises the step of providing audio transmission, whereby the spectators are furnished with audible programming.

41. The method of claim 40 wherein the audible programming comprises at least one of play-by-play, expert commentary, traffic reports, and weather reports.

* * * * *

EXHIBIT 14



US00724888B2

(12) **United States Patent**
Inselberg

(10) **Patent No.:** **US 7,248,888 B2**

(45) **Date of Patent:** ***Jul. 24, 2007**

(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE ENTERTAINMENT EVENT**

(76) Inventor: **Eric Inselberg**, P.O. Box 833, Short Hills, NJ (US) 07078

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

This patent is subject to a terminal disclaimer.

(21) Appl. No.: **11/300,208**

(22) Filed: **Dec. 14, 2005**

(65) **Prior Publication Data**

US 2006/0094409 A1 May 4, 2006

Related U.S. Application Data

(63) Continuation-in-part of application No. 10/792,170, filed on Mar. 3, 2004, now Pat. No. 6,996,413, which is a continuation-in-part of application No. 10/378,582, filed on Mar. 5, 2003, now Pat. No. 6,760,595, which is a continuation-in-part of application No. 09/854,267, filed on May 11, 2001, now Pat. No. 6,650,903, which is a continuation of application No. 09/656,096, filed on Sep. 6, 2000, now Pat. No. 6,434,398.

(51) **Int. Cl.**
H04Q 7/20 (2006.01)

(52) **U.S. Cl.** **455/517**; 455/3.03; 455/575.6; 463/40

(58) **Field of Classification Search** 455/66.1, 455/90.3, 575.6, 517, 550, 414; 463/36-42; 725/9; 705/27, 37, 3

See application file for complete search history.

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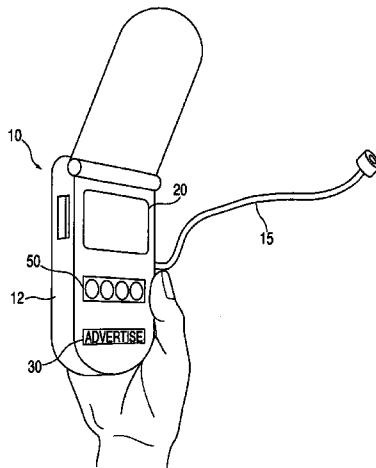
Primary Examiner—Jean Gelin

(74) *Attorney, Agent, or Firm*—Ernset D. Buff & Associates, LLC; Ernest D. Buff; Gordon E. Fish

(57) **ABSTRACT**

A method and apparatus provide interactive audience participation at live entertainment events. Enjoyment for a plurality of participants is enhanced. Participants employ wireless interactive devices that present a promotional message and include user input and output interfaces. Participants are queried, and enter answers via the user input interface. The answers are transmitted to a central processor, stored as participant data, and processed into results. A visual display or the user output interface announces the results to the participants.

76 Claims, 3 Drawing Sheets



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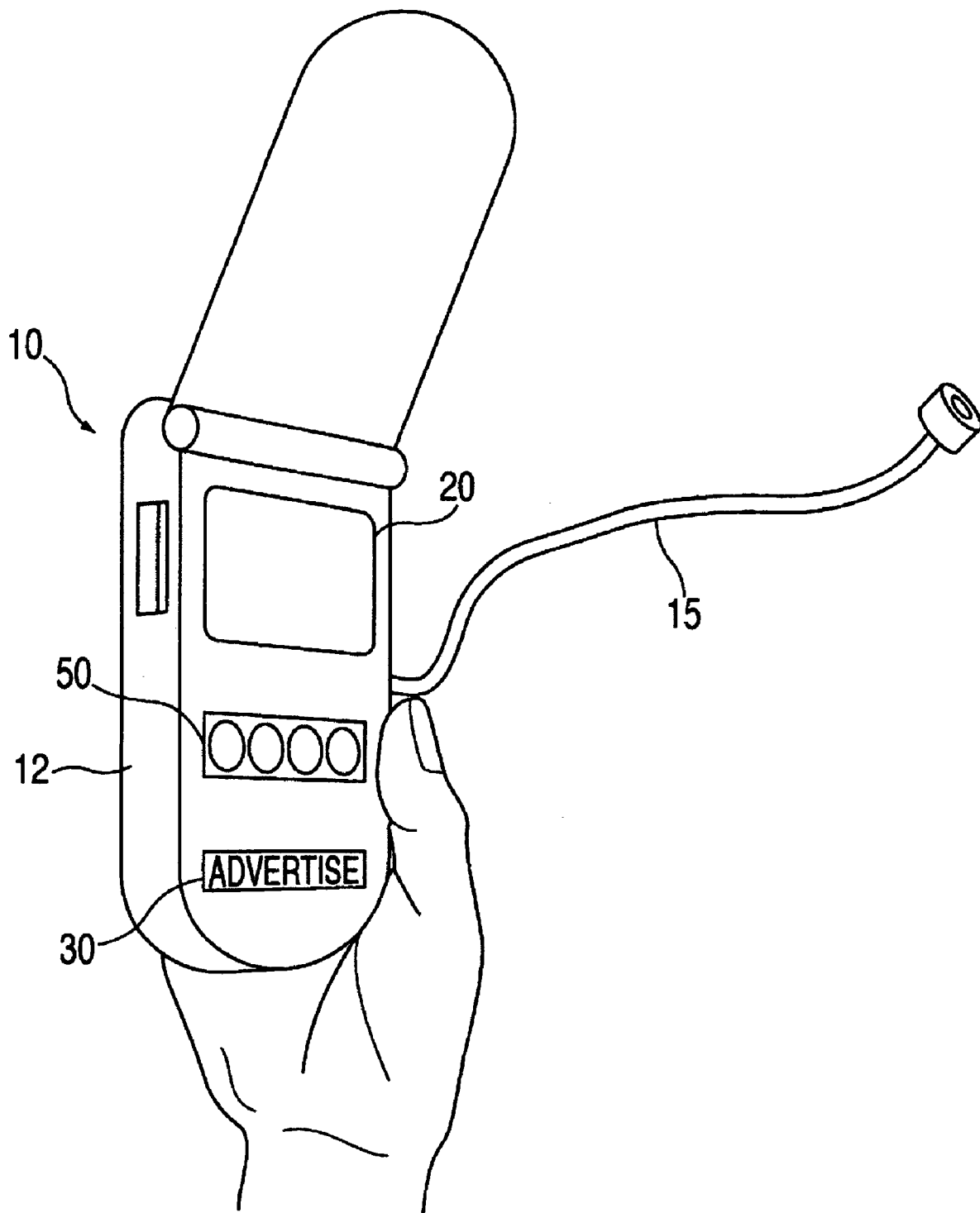


FIG. 1

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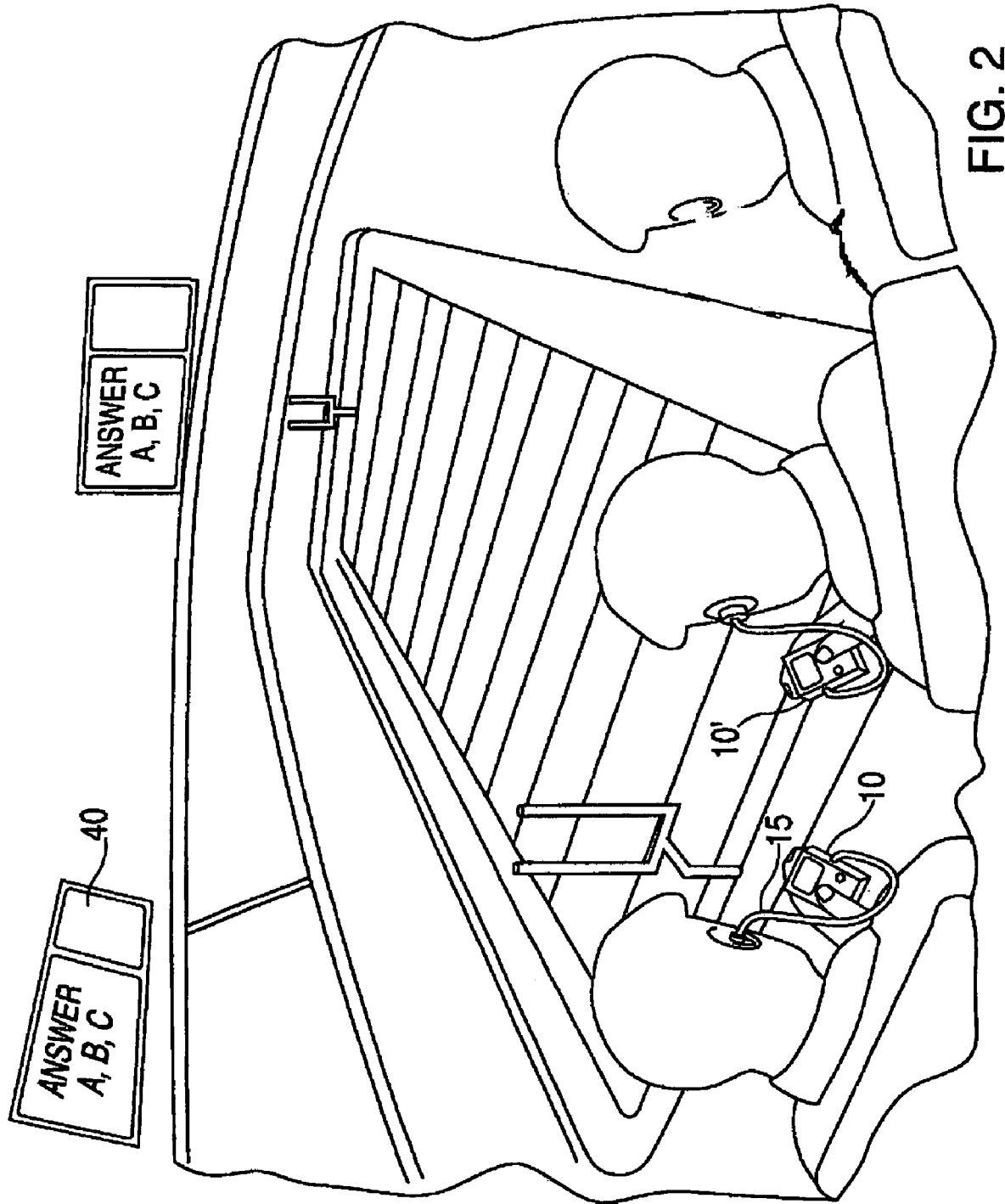


FIG. 2

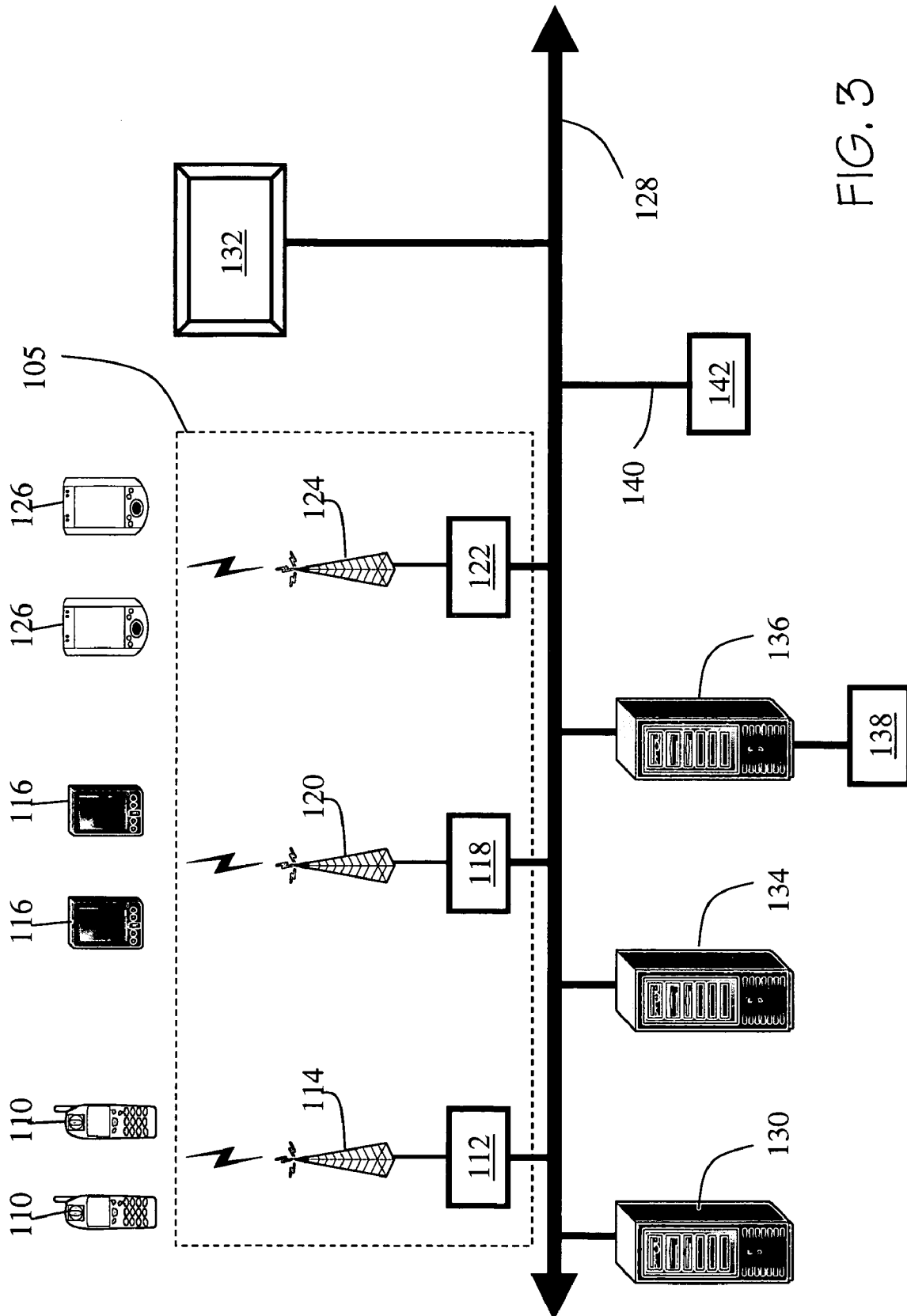


FIG. 3

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METHOD AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE ENTERTAINMENT EVENT

RELATED U.S. APPLICATION DATA

This application is a continuation-in-part of U.S. patent application Ser. No. 10/792,170, filed Mar. 3, 2004 now U.S. Pat. No. 6,996,413 which, in turn, is a continuation-in-part of U.S. patent application Ser. No. 10/378,582, filed Mar. 5, 2003, now U.S. Pat. No. 6,760,595, issued Jul. 6, 2004, which, in turn, is a continuation-in-part of U.S. patent application Ser. No. 09/854,267, filed May 11, 2001, now U.S. Pat. No. 6,650,903, issued Aug. 18, 2003, which, in turn, is a continuation of U.S. patent application Ser. No. 09/656,096, filed Sep. 6, 2000, now U.S. Pat. No. 6,434,398, issued Aug. 13, 2002. Each of application Ser. Nos. 10/792, 170, 10/378,582, 09/854,267, and 09/656,096 is incorporated herein in the entirety by reference thereto.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a system and method for interactive audience participation at a live entertainment event; and more particularly, to a system and method by which spectators answer queries using wireless interactive devices, the answers are correlated and results are announced, thereby enhancing the spectators' experience and enjoyment.

2. Description of the Prior Art

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live entertainment events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON®. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live entertainment events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a sports team. Accordingly, in order to continue attracting live

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audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members ordinarily spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and expressing one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally, fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, any particular seat location affords its occupant only a single view of a playing field. In addition, some locations fail to offer an unobstructed view of the entire field. On other occasions a technical ruling made by a game official is not fully explained to those in attendance but is extensively analyzed by television and/or radio announcers, often with one or more instant replays of the event in question. Fans commonly resort to carrying conventional portable radio and TV receivers to games, whereby they obtain game commentary, instant replays, and the like to complement what they directly observe or obtain from the stadium's own announcers, scoreboards, and video displays.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

Accordingly, there remains a need for a method and system that provides interaction that heightens the enjoyment experienced by participants at a live entertainment event.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of audience members at live entertainment events by more fully involving the audience. In a preferred embodiment of the invention, there is provided a method for enabling interactive participation at a live entertainment event held at a live event venue and attended by a plurality of persons, at least a portion of whom are participants. Each participant employs a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface. The method comprises communicating information and queries to participants at the event, such as a sporting event, using a wireless interactive device in conjunction with a wireless communications system. By having and using such a wireless interactive device, participants are permitted to respond to displayed messages or to participate in contests and interactive activities of various sorts. Individual fan feed-

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back is received and transferred to a central processor for storage and processing (e.g., tabulation or statistical analysis). Thereafter, the results are optionally announced to the individual fan or to the audience as a whole. The interactive device is preferably a wireless, hand held device, having user input and output interfaces. The user input interface preferably comprises at least one member selected from the group consisting of a keypad, selection buttons, a touch screen, a rotatable dial, cursor keys, a pointing device (e.g., a mouse or trackball), and a voice recognition system. The user output interface preferably comprises a visible display for alphanumeric, textual, or graphic images and audio output means such as a speaker or earphone. Preferably the device is a cellular telephone, two-way pager, or wireless personal digital assistant (PDA) or pocket PC. It is further preferred that the device be Internet enabled, and that the wireless communication system employ the Internet in the bidirectional communication of data. Alternatively, the interactive device may be a special-purpose device incorporating at least the features needed for the practice of the present method. Communication protocols other than the Internet may alternatively be employed to provide the desired interactive communication.

The device is easily transported, permitting the participant to carry it to other locations in the event venue, e.g. on trips to the concession stands or to the restrooms. Further, the method presents audio or video promotional messages of sponsors and advertisers to each user of the interactive device. The promotional message may be permanently affixed to the device and/or transmitted to each device via any available communication modality.

In an aspect of the invention, contests may be conducted wherein a fan is asked to predict the next event or events to take place (e.g. the outcome of the next at bat in a baseball game or the next play or plays to be called in a football game on a real time basis, all star balloting, pitching changes, etc.). Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the fan selects from a list of promptings and/or possible answers. Prizes may be offered. The degree of attention and receptivity accorded to promotional messages and advertisements received by patrons using an interactive device at a live entertainment event in accordance with the present method is beneficially increased. The combination of the atmosphere of the live venue with the interactive content; and the stimulus of active participation and interaction with other fans frequently heightens the degree of interest of participants at a live event for proffered advertisements over that accorded by those who passively view or hear broadcast coverage at home or another remote location. The spontaneity and excitement engendered at the actual event enhance the likelihood that a fan will perceive advertised items favorably. A fan at the live event is also more likely to respond positively by purchasing food and beverage items, souvenirs, team promotional merchandise, and the like.

In a further aspect the method makes it possible to receive instantaneous and correlated feedback from a large number of motivated patrons. Their comments, directed both to advertised products and services and to the entertainment itself, are valuable information for sponsors, teams, leagues, and providers of goods and services, for example.

In yet another aspect of the invention, event-related audio or video content are optionally transmitted wirelessly to the interactive device during the live event for output to the user. The transmitted content optionally includes other desirable informational items such as news, traffic, weather conditions and forecasts, news and scores of other sporting events. The

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availability of such material increases participants' enjoyment and the perceived value of attending a live sporting event. The method and system of the invention are advantageously practiced at a live spectator event, by which is meant an organized event wherein a large number of patrons are gathered to witness and enjoy in real time any form of entertainment, including an event such as an artistic or athletic performance or an important business, civic or religious event. Ordinarily, such live events are scheduled in advance and involve programmatic content or entertainment, e.g. comprising an athletic contest, concert, speaker, performer, exhibition, or the like. In many instances, the programmatic content has a defined duration, such as an athletic contest or concert that has an identifiable beginning and end. In other instances, the live event comprises a plurality of constituent parts, such as a tennis tournament, in which plural matches are played during the course of a day's activity. Matches in such a tournament may be played on a single court, or concurrently on plural courts in some venues.

Events frequently, but not always, require the payment of an entry fee by an attendee. Live entertainment events in most cases are open to any member of the public who purchases the requisite ticket or otherwise pays the entry fee; alternatively, participation may be restricted to persons invited by organizers of the event.

Such live entertainment events may be conducted at permanent facilities, such as indoor and outdoor stadiums and arenas for sporting events and other public gatherings; amphitheaters; auditoriums; concert halls and theaters; race tracks for animals or vehicles; theme parks; convention centers; casinos; exhibition halls; shopping centers; museums; or other similar venues associated with organized gatherings of large numbers of people. Live entertainment events can also be held at facilities that are temporary and not ordinarily appointed for large gatherings, such as golf courses or temporary urban road racing courses. It is contemplated that the present method may be carried out at events of the aforementioned or similar types.

Often the location of the live entertainment event is a building with defined entrances or an indoor or outdoor area demarcated by fences or other barriers with defined points of entry that may comprise gates, turnstiles, or the like. Many live events take place in a stadium, arena, or auditorium having defined spectator seat locations, e.g. seats uniquely denoted by section, row, and seat numbers or the like. In addition to the actual performance area (such as a playing field or concert stage) and the appointed spectator area, event facilities ordinarily have auxiliary or appurtenant public areas associated therewith. Such areas provide facilities and services that are desirably or essentially associated with the live entertainment event. The auxiliary areas are generally adjacent or in close proximity, and may include non-exclusively: ticket windows; passageways; rest rooms; clubs; restaurants; concession stands selling food and beverages; lounges; overflow areas with audio and/or video links to the principal event area; shops selling souvenirs, promotional merchandise, novelties, or related items; and service facilities such as parking lots and stations for public transportation; and the like. For example, patrons at an athletic event frequently engage in social activity in a venue's parking lot before or after the event, often including the consumption of food and beverage, a practice commonly known as "tailgating." Such activity bears a clear thematic relationship to the athletic event itself, since there is ordinarily extensive conversation about the event, the competing teams or players, or the like. Similar activity is common in

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connection with concerts and other live spectator events as well. All of these and related activities that are within the penumbra of the programmatic content of the live entertainment event and occurring in the environs of the corresponding live event venue are to be understood as falling within the bounds of the live entertainment event. Therefore, it will be understood that the term "live event venue" as used herein and in the subjoined claims, refers collectively to the primary performance area at which the live event is conducted, the appointed spectator area, and auxiliary areas associated with the location, including areas such as those enumerated above.

Also contemplated within the scope of the invention is interactive participation during other forms of live entertainment.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood and further advantages will become apparent when reference is had to the following detailed description of the preferred embodiments of the invention and the accompanying drawings, wherein like reference numeral denote similar elements throughout the several views and in which:

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of a hand held device used in connection with the interactive audience participation system of the present invention;

FIG. 2 is a schematic diagram of audience members at a spectator event utilizing the interactive audience participation system of the present invention; and

FIG. 3 is a schematic diagram of a system of the invention for enhancing spectator enjoyment and interaction.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

Referring now to FIG. 1, there is shown one form of a hand held, interactive device **10** adapted for use in connection with the interactive audience participation system of the present invention. In one embodiment, device **10** is employed by audience members at a live event as shown in FIG. 2. The device is adapted to communicate bi-directionally with a wireless communications system operative at a live entertainment event, to provide information to a user, and to accept entry of information through a user input interface for transmission to the wireless communications system. In a preferred embodiment the device **10** includes a housing **12** with an electronic display opening. An electronic display (visual display) **20** providing one form of user output interface is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display may be of many types, e.g. employing liquid crystal or electroluminescent displays. The electronic display is in electrical communication with a local microprocessor mounted within the housing. A transceiver in electrical communication with the local microprocessor allows for the transmission and receipt of data from a wireless communications system connected to a central processor (not shown) in a manner known in the art. The electronic display is adapted to output information received from the local microprocessor, such as graphic or textual messages that ask the audience member to answer a ques-

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tion, provide an opinion, or convey other important information. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display. The visual display may be limited to presenting alphanumeric messages, but more preferably is capable of displaying graphical, pictorial, or streaming video input at various scan rates, preferably in real time. Keypad **50** accepts user input for transmission to the central processor.

In another aspect of the invention, the interactive device is optionally used by participants to receive audible or video programming, which may be transmitted in the commercial AM or FM broadcast band or at any of a number of predetermined frequencies in the RF, VHF, UHF, or microwave frequency bands. The transmission may be analog or digital. Programming may also be transmitted optically, such as by modulation of an infrared emitting source located in the venue and received by a complementary photoreceptive element in the wireless interactive device and suitably processed for intelligible output. Optionally, the device also comprises means for receiving and displaying video signals such as from ordinary broadcast television stations. Transmission of such program content may be done via conventional commercial broadcast stations or with low power transmitters intended only to cover the immediate live event venue. Transmitters are optionally located either within the venue, in its environs, or in any other location that permits a sufficiently intense signal to be present in the venue. In a preferred embodiment device **10** incorporates circuitry to receive the aforementioned audio or video program content. The circuitry is adapted to receive the content and present it to the user. An earpiece **15** is preferably included to allow the user to listen to the audio content associated with the device without annoying neighboring fans. It is noted that other listening means could be employed such as earphones, speakers, or the like.

In other embodiments the aforesaid audio or video programming may be transmitted via any computer network to which the interactive device is connected, such as by streaming audio or video transmitted via the Internet, in accordance with presently employed protocols or other suitable protocols.

Such audio or video programming preferably comprises information or program content that is thematically related to the live entertainment event or that provides content useful to the participants at the event. The content may include descriptions of the action at the event, related expert commentary, or instant replays. The content optionally includes other information of interest to participants, such as news and traffic reports and weather conditions and forecasts desired by the patrons. Furthermore, the audio or video programming may include dissemination of questions or other matter incident to contests and polls conducted in accordance with the invention.

It is contemplated that special purpose devices such as the aforementioned interactive device **10** optionally be made available to those patrons who do not carry a conventional wireless device such as a cellular telephone, two-way pager, personal PC, or PDA. Units possessing the required wireless communications capability, electronic display, and user input and output interfaces are easily assembled using off the shelf components, such as transceivers, displays, keypads, and microprocessors, and other miscellaneous electronic components. These special devices would preferably be prepared for each event at one or more locations, having battery charging and menu programming capability, and transported to kiosks or otherwise made available near

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patron entry points in the venue. The kiosks would each be either sales locations or rental contract stations to secure deposit and payment terms (cash, credit/debit card, etc.), for furnishing the special devices to patrons prior to start of the event, and collection of rented special devices after conclusion of the individual's participation. Optionally, such a device is provided to at least selected participants as part of the price of admission or, alternatively, as an optional item rented or purchased by the participant, and preferably subsidized by the promotional messages.

In another aspect of the invention, wireless devices such as those routinely possessed and used by members of the public, are used for the aforementioned interactive communication. Preferably the wireless devices are selected from the group consisting of wireless personal digital assistants (PDA) and Pocket PC's; two-way pagers; and cellular telephones. Such devices normally incorporate input means such as keypads, selection buttons, and touch screens, and video and audio output means such as display screens, speakers, and earphones. The devices typically include circuitry, such as a local microprocessor, adapted to convert wireless input into forms presented by the output means and to accept user-entered input that is converted for wireless output in a manner known in the art. Many of these devices are also Internet-enabled, that is to say, able to send and receive textual or graphic data in protocols which are commonly associated with Internet technology and able to be processed suitably by routers, servers, and other ancillary equipment used in Internet communication. Additionally, such devices frequently have the capability of sending and receiving electronic mail and Internet-based instant messages which may be transmitted worldwide over the Internet. Suitable PDA's include wireless units sold under the PALM™ tradename by Palm Computing and under the BLACKBERRY™ tradename by Research in Motion. Wireless Pocket PC's sold, e.g. by Hewlett Packard, Compaq, and Dell are also suitable.

Known user-supplied wireless interactive devices are ordinarily equipped with either software or hardware features that provide a unique signature or identification of each device, e.g. the telephone number of a cellular telephone or the IP address of an Internet enabled device. The aforementioned special-purpose devices are also provided with unique identification. Both the special-purpose devices and the user-supplied general-purpose devices are adapted to transmit the unique signature for identification purposes. The present method preferably employs at least one unique signature of each wireless interactive device, whereby a given participant's entries and responses may be individually attributed and tracked and the various interactive features described herein may be individually or collectively implemented. In addition, there is generally an electronic account associated with each user-supplied device for charges and credits. In some of the embodiments of the present invention, charges are levied for goods and services provided and transferred to the account associated with each device. Likewise, monetary credits, coupons, and the like can be disseminated either electronically to the account or by mail to an address associated with the account. In addition, it is preferred that information establishing each participant's location within the live event venue also be associated with that user's device. The association can be effected in many ways. Preferably, a given user is provided with one or more identifying indicia that can be entered using the user input interface of the device and included in the unique signature transmitted by the device. For example, patrons may be provided with indicia distributed beforehand

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or upon request entered through the wireless device, e.g. through wireless connectivity to the Internet. Indicia may be provided by regular mail, e-mail, telephone text messaging, by connecting with an appointed Internet site, or any other suitable means. More preferably, each entrant's ticket bears unique identifying indicia and an attendee desiring to be a participant enters the indicia using the user input interface of his/her wireless interactive device. In an even more preferred embodiment, suitable for venues in which each patron has an appointed seat location, each entry ticket bears seat location information denoted in ordinary ways, such as by section, row, and seat numbers, and optionally, additional and unique predetermined confirmatory indicia, both of which are entered through the user input interface of the wireless device. The unique signature of each wireless interactive device contains coding corresponding to the seat location and/or the indicia. The entry of both codes provides an improved security feature, since unique signatures corresponding to entries with seat and confirmatory codes which do not match may be excluded as being invalid or possibly fraudulent. The foregoing features by which users are individually identifiable also permit the various services offered selectively to qualified, appropriate, or interested patrons or groups of patrons. Some wireless interactive devices further incorporate localization circuitry, such as Global Positioning System capability, whereby the device can ascertain and electronically transmit its physical location to location receiving circuitry, e.g. as furnished by a wireless service provider.

As there are many suitable alternatives on which to base an embodiment of the current invention which are known to those skilled in the art, the specific interactive device and wireless communications technology used, the specific multiple access communication protocol used, and the specific client/server hardware interface and protocol are not important to the method of the invention so long as they support the required functions. What is important is the method of this invention by which the customer is provided better service.

A number of currently used communications protocols suitably provide connectivity between several of the aforementioned user devices and a wireless communications system. One presently preferred protocol is provided by the commercial cellular telephone network. Many wireless or cellular telephones currently operative with these networks incorporate provisions for sending and receiving textual messages and graphic images, and for exchanging electronic mail through the Internet. Improved capabilities for wirelessly transmitting streaming video at various scan rates are rapidly being developed and are useful in the practice of the present method. Current cellular telephone systems provide various forms of instant messaging capability also useful in transmitting and receiving the queries, advertisements, and the like used in the present method. Messaging in accordance with the Short Message Service (SMS) protocol is presently preferred, but other forms of messaging are also contemplated within the present invention.

The bilateral wireless communications used in the practice of the present method and system are preferably implemented using at least one transmission form selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions. Ultra-wide band and spread-spectrum transmission are especially promising technologies for the broadcasting of messages and transmission of participants' responses. The multiplexing and frequency shifting inherently available in such technologies improve immunity

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to noise and interference and the security of data in transmission. For example, suitable techniques which may be used in the implementation of the present system are practiced in connection with cellular telephone systems, including such currently preferred methods as frequency division multiple access (FDMA), time division multiple access (TDMA), code division multiple access (CDMA), and global system for mobile communications (GSM) protocols, as well as other protocols including those defined by the International Telecommunications Union. Especially preferred are implementations of the present method compliant with interoperability standards promulgated by the Open Mobile Alliance and made available at the website www.openmobile.com and by the WAP Forum at the website www.wapforum.com. It is also preferred that access to the interactive features of the present invention be provided to customers of more than one provider of wireless services, including providers of cellular telephone service or of wireless access for PDAs and Pocket PCs. In some embodiments, such access for participants employing wireless interactive devices served by a plurality of providers is provided by a wireless communications system wherein network connection of plural providers permits needed exchange of information, e.g. via the Internet. In other embodiments, the wireless communication system comprises one or more authorized providers of wireless service. Participants employing wireless interactive devices served by another wireless service provider are furnished an access code, such as a telephone number and optionally further codes, or the like, permitting them to connect to one of said authorized providers, whereby they are enabled to participate in the present method, being afforded access to the various features described herein.

Another preferred communications protocol is specified by IEEE Standard No. 802.11, published by the Institute of Electrical and Electronics Engineers, and incorporated herein in the entirety by reference thereto. Standards in the IEEE 802.11 class (which are also known commonly as "Wi-Fi") specify a local area network system for wirelessly connecting individual devices such as PDA's and Pocket PC's to a local server through which the devices may communicate wirelessly, e.g. through a local intranet or the global Internet. Other wireless protocols that may be used to establish connectivity are also known, such as the Bluetooth Standard, published by the Bluetooth SIG and available through the website www.bluetooth.com, and incorporated herein in the entirety by reference thereto.

It will be understood by one skilled in the relevant art that different transmission modes and frequencies may be used by the wireless communications system for the transmissions to and from the wireless interactive device and that multiple transmission modes and frequencies may be used to accommodate interactive devices of different types simultaneously operated in the present system.

One representative embodiment of the present invention provides a method of enabling interactive participation by a plurality of participants at a live event employing a wireless interactive device. The interactive participation enhances the enjoyment of such participants at a live event transpiring at any form of entertainment venue.

The number of attendees constituting the plurality of participants can vary depending on factors such as the size and nature of the live event, the prevalence of user-supplied wireless interactive devices, the availability of devices for sale or rent on location, and the characteristics of the venue. At events with a very large number of attendees, e.g. the 50,000 to 100,000 or more fans that attend many major

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collegiate and professional sports games, a very small fraction of the participants suffices to provide statistically significant information characteristic of the entire crowd if the individuals are representative of the whole. For example, public opinion polls often rely on a sample as small as 500-1000 respondents to infer the views of the entire population of the United States. Accordingly, the term "plurality of participants" as used herein, means a number of participants varying from about 50 to as many as 100,000 or more. Preferably the number of participants is at least about 1 percent of those persons present at the live event. Most preferably, the plurality of spectators ranges from about 25 percent to substantially all the attendees present at the live event. In some embodiments, the opportunity for attendees to participate in activities contemplated herein is extended to all those in attendance at the live entertainment event who either provide a suitable wireless interactive device or purchase, rent, or are furnished a device at the event.

In a further embodiment, the method and system of the present invention are advantageously practiced in connection with live events that entail simultaneously-occurring but thematically-related activities in different, sometimes non-contiguous locations within an overall event venue, such as golf and tennis tournaments and the like. For example, a golf tournament ordinarily comprises staged play, wherein the competing golfers begin play at individually appointed times over an extended period, so that play is occurring simultaneously at each hole through most of the duration of the event. Important tennis tournaments such as the U.S. Open or Wimbledon are ordinarily played in a venue comprising plural courts on which matches occur simultaneously. During the Winter and Summer Olympics, competition occurs simultaneously in many sports, sometimes in widely scattered and sometimes non-contiguous locations. In such instances, it will be understood that the live event venue may comprise such non-contiguous locations. In each of these situations, the interactivity afforded by the present method provides a marked enhancement of the fan experience. The wireless interactive device of the invention allows spectators present at a location in which one of the activities is occurring to remain apprised of the progress of other activities, even those occurring in disparate locations.

In yet other embodiments, the present method is also used in connection with live entertainment that is not associated with specific and defined programmatic content having an identifiable duration, such as that associated with an athletic event, a musical or theatrical performance, or the like. For example, the entertainment may be provided inherently to individuals as a consequence of patronizing a museum, casino, shopping mall, theme park, agricultural fair or similar exposition, a trade show, convention, or the like. Such situations may or may not include specific programmatic content having a generally defined duration. In some instances, the totality of entertainment activities has a duration bounded by opening and closing hours of a museum, mall, park, fairgrounds, convention hall, or the like. On the other hand, casinos often operate around the clock. In either case, it is to be understood that the term "live entertainment event" is bounded, with respect to any particular individual, by that individual's active or passive participation in any form of entertainment, instruction, or promotion associated with the venue.

For example, at a trade show, an attendee is often provided with commercial or technical information or promotion of goods or services offered by exhibitors at the show. It is to be understood that dissemination of such information or promotion constitutes entertainment within the meaning

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of that term as used herein, and the duration of the live entertainment event is understood to be defined by the attendee's presence at the venue. Similarly, a casino is often associated with a venue that includes a gaming area in which persons engage in any of a variety of games of chance or gambling, as well as other appurtenant areas providing restaurants, shops selling various forms of merchandise, theaters or auditoriums, public gathering areas, and hotel accommodations. Participation in the present interactive method may be afforded to persons in any of these locations, all of which are to be understood as included in the term "live entertainment venue" as used herein. Other auxiliary areas such as parking lots, lawns, and the like are to be understood as included as well. The operation of casinos often entails some activities that are substantially continuous or repetitive in nature, such as the various games of chance known to patrons of such establishments, as well as other forms of entertainment that have a defined duration, such as live stage entertainment shows, concerts, sporting events, or the like. All of these activities are to be understood as being part of a live entertainment event for a participant enjoying these activities during his/her attendance at the live event venue.

In a step of the method, there is provided a wireless communication system adapted to transmit and receive messages with the wireless interactive devices used by the participants. The wireless system is used to disseminate promotional messages to the participants through the user output interface of the wireless device.

The wireless device employed in the present method preferably presents promotional messages or advertising from sponsors and/or advertisers. Monetary compensation for the presentation of such advertising material is optionally used to defray or underwrite the costs associated with practice of the present invention. Messages can be in the form of indicia located (e.g., physically imprinted) on devices loaned, rented, or sold to participants. Additionally, the messages can be visually displayed by the device or can be aurally communicated through the same. The messages can be in the form of preprogrammed or stored aural or visual messages or recordings that are played, e.g. when the device is powered up or down, or at regular or random intervals during usage of the device. Preferably, messages are transmitted by the wireless communication system and presented live during the entertainment event via open band lines. Visual advertising may be presented in discrete segments interspersed with program content or it may be incorporated substantially continuously into the overall image being presented at a given time, such as a banner ad.

In still another aspect of the present method, demographic information or characteristics of the users of wireless interactive devices are gathered and used in various ways. Users may be asked to enter information, such as their age or gender. Alternatively, such information may already be extant and available in databases, such as records of cellular telephone customers. Such information may be used to select which of a plurality of advertisements are most appropriate and likely to be of interest to a given user. The individual addressability of devices such as cellular telephones and wireless PDA's permits individually selected commercials to be presented to particular individuals or groups. Demographic information may also be used to tailor questions and limit contest participation to selected users. For example, in some embodiments participation in all or part of a survey or competition may be offered only to a restricted group, such as preferred corporate customers, patrons in selected classes of seats, season ticket holders,

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youths, or other defined groups. At a casino or other entertainment venue within which entry to certain areas and participation in certain events, e.g. gambling and consumption of alcoholic beverages, is restricted by age, promotional messages may be limited accordingly. In addition, customer survey information is considered more useful by advertisers if the answers are categorized by the demographics of the respondents. All of these functions are easily implemented in the practice of the present method.

In an aspect of the invention, interactive participation using the present method and system is limited to participants who have been enrolled. Such enrollment may be effected by any suitable process carried out either before or during the live entertainment event. Optionally, enrollment requires monetary consideration from the person becoming an enrolled participant. Preferably, a participant enrolls by entering a predefined participant activation code using the wireless interactive device. In some implementations, an activation code is printed on a patron's entry ticket. Optionally the enrollment comprises entry of a physical location, such as a patron's designated seat in an auditorium or stadium. The activation code may also carry location information. Alternatively, prospective patrons may enroll by a method including a request for enrollment transmitted by telephone, e-mail, interactive registration through an Internet site, regular postal mail, in person at a kiosk at the event venue, or by using dedicated terminals at the venue. Optionally, the patron is provided with an activation code to be entered using the user input interface of the wireless device. Alternatively, persons having a suitable wireless device with localization circuitry may be identified as being present in the venue and thereafter enrolled automatically or be offered the chance to accept enrollment, e.g. by exchange of text messages. In other embodiments, participation is limited to persons who have enrolled and who are also identified by wireless device localization circuitry as being physically present at the event venue. Optionally, the participant status is terminated when the individual is no longer present in the venue, but may be restored automatically upon return to the venue. The enrollment may also be for a predetermined time period and expire thereafter. The dissemination of information, such as promotional messages and queries for the interactive contests afforded by the present method, may be limited to participants actually present at the venue.

In yet a further aspect, the present method may be used to conduct contests, games, and opinion polls of many types. Generally stated, such activities comprise the steps of: posing one or more questions to participants; eliciting the participants to enter an answer to the question using their wireless interactive devices; and processing the results. The questions may be posed using any communication form by which they can be effectively conveyed to participants. Preferably the questions are in a form that may be answered by selection of one of a relatively limited number of alternatives, such as a multiple-choice question or a rating scale. Answers may be entered using the user input interface. Preferably, the results are reported to at least the participants, but they may also be furnished to sponsors, advertisers, or other interested parties.

Contests and games may include many different types of questions. At sporting events, questions may likely entail game strategy; evaluations of performance; predicted outcomes of upcoming plays or games; trivia questions about past or present players, teams, championships, and performance statistics; or the like. For example, at an athletic event such as a football game, the questions may relate to selection of a most valuable player or to game strategy, such as

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whether a running or passing play is preferred in a given field situation. At a golf tournament, participants might be asked to indicate which club a player ought to select to accomplish a given shot. Concertgoers might be asked to select a favorite song or artist from a number of choices presented or to choose songs to be performed during the concert. Civic events and political rallies might evoke questions about preferences of candidates for public office, opinions about civic issues, legislation, and public policies of many sorts. When practiced in connection with live entertainment events at a casino, the questions might involve tips, strategies, and instructions relevant to games of chance and participation therein, or even participation in on-line gaming. Participants may also be asked to rate goods or services, e.g. for quality, popularity, ease of use, or other desired characteristics. Other types of questions of more general nature and interest may also be used. Answers may be accepted for an extended period up to the full duration of the live event, but preferably are accepted during a limited, preselected time interval. Preferably, participants in the contests, games, or polls conducted in accordance with the invention are awarded prizes or other forms of consideration as inducement to participate. For example, one or more participants who correctly answer contest questions or participate in games or opinion polls may be awarded a cash prize or credit. One preferred form for the delivery of such a credit is an electronic coupon that can be redeemed for any form of consideration, including concessions, merchandise, and/or other prizes available at the live event venue. For example, a message may be transmitted to a user's wireless device bearing a unique authentication code that could be verified by a vendor, such as through a cash register electronically linked to the central processor or order processing server, or by a telephone call to a preselected verification number. Alternatively, a graphic image such as a bar code or other like pattern indicative of the coupon could be delivered for display on the user's wireless device and read by a suitable reader at a cash register. In still another alternative, a printed coupon can be physically delivered to the participant based on the location of the user's interactive device by means of communication with the transceiver located therein or by other indication means, or delivered to a remote location by actual physical delivery by mail or the like, or by any form of electronic delivery. In still another alternative, either points or direct monetary credits are entered electronically into an account associated with a user, such as a user's credit or debit card, an account for the user's wireless device or Internet service provider, or by other like means known in ordinary commerce. For example, a user collecting sufficient points may redeem them for goods, services, or money.

In an implementation, the present method also comprises querying the participants to respond with answers entered through the user input interface of the wireless device and transmitted therefrom using the wireless communication system. The answers received are transferred to a central processor for processing into results. It will be recognized that the accumulation of results may be done in the central processor or in one or more distributed receiving servers networked in data communication with the central processor by techniques well known in the computer art, such as by use of a local area network communicating over wire, wireless, or fiber optic communication links. Preferably, a stored computer program operative in either form of server accumulates and stores the incoming answers, at least temporarily, as participant data. The results of processing the participant data are also preferably stored, at least tempo-

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rarily. At a suitable time, such as after the expiration of an announced deadline for participants to enter and transmit their responses to queries, the processed results are then announced to the participants. Optionally prizes are awarded to participants who have entered an answer.

It will be understood that all of the aforementioned computing functions can be carried out by one or more general-purpose computer processors located either within the event venue or its environs, or at a remote location linked by any suitable data communications link using cable, fiber-optic, wireless, or other comparable transmission. The computing functions may be carried out by a single central processor, by linked distributed processors, or a combination thereof.

Queries can be promulgated to the participants in many ways, including notice given by public address system announcements, visual displays on scoreboards, video monitors, or the like visible to the participants, or by messages such as aural, textual, or graphic messages transmitted to the interactive units and then output to the participant using the user output interface. In some implementations questions may be printed in event programs, flyers, newspapers, or the like. Optionally the queries are included in content provided by Internet portal sites to which the fans are connected. Questions may also be included in audio or video play-by-play descriptions, commentary, or announcements, or in other program content broadcast to the interactive units. Preferably, the questions are promulgated using at least one display visible to the participants. More preferably, the visible display comprises large-scale displays, scoreboards, and/or monitors provided in the venue. After assimilation and processing of participant responses, announcement of results may be given to the participants by similar means, or by another form of public dissemination, such as an Internet posting.

Displaying the results of the processing of the participant data is a step that generally follows the processing of the participant data. This provides feedback to the participants, for example showing them how their answers compared to those of other participants.

In one embodiment, a display visible to a sizable number of participants, such as large scoreboard or screen display 40, as depicted in FIG. 2, is used both for promulgating queries to participants and for announcing results. Any one or more large display devices capable of displaying a video, graphic, or alphanumeric image to a large number of participants may be used, a JUMBOTRON® display being one suitable and preferred type. Alternatively, the display visible to the participants comprises plural video monitors, preferably dispersed throughout the venue. For example, such monitors in the form of CRT displays, plasma screens, or other forms of video display devices may be provided in auxiliary areas of the live event venue or in private luxury box seating areas, such as those now commonly found at sports stadiums. Although FIG. 2 depicts the practice of the present method a football stadium, it will be understood that the present invention may also be practiced at any other type of live event venue.

The questions and results are optionally displayed on these monitors. A user input interface, such as keypad 50 on device 10, allows an audience member to enter a response to queries. Examples of simple user input interfaces include a keypad, selection buttons, a touch screen, a rotatable dial, a pointing device such as a mouse or trackball, and a voice recognition system, but any other user interface by which the required input can be effected could be incorporated in the practice of the invention. A voice recognition system advan-

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tageously facilitates the use of the present system by visually impaired persons. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

In FIG. 2 there is depicted the practice of an embodiment of the invention. At least some of the spectators at an athletic event occurring in a large, outdoor stadium are provided with an interactive device 10 and 10'. It will be understood that the interactive device may be an item provided by the participant such as a cellular phone, or a wireless PDA or Pocket PC. Alternatively, suitable general- or special-purpose devices are made available at the spectator venue for purchase or rent or are given away without charge. In still other embodiments, the present system is operative both with user-provided devices and devices made available at the live event. The present inventor contemplates that only a portion of the spectators in attendance at an event may choose to participate, either by using a suitable interactive device they furnish or by obtaining a unit at the venue. In other embodiments of the invention up to substantially all of the patrons at a live event participate in accordance with the present method. In some implementations, participation is limited to participants who have officially enrolled, as provided herein. FIG. 2 further depicts the users entering answers to a query using keypads available on their respective interactive devices and the display of answers on a large display board 40. In addition to displaying results of the audience querying or contest, the material displayed on board 40 or dispersed video monitors optionally also includes promotional messages or advertising. For example, a given contest question might be sponsored by a business entity in return for including advertising for the entity's products or services during the querying and announcing associated with that contest.

The offering of prizes to one or more selected participants who have responded to the querying, participated in the interactive games, or correctly answered quiz questions may be utilized to enhance the enjoyment of participants, to encourage further participation in the querying and contest aspects of the present method, and to promote the sale of goods and services. Such prizes include goods and services of any form or discounts toward the purchase thereof. Items may be delivered directly to a winning patron either at the live event location or another preselected location. Alternatively, coupons redeemable for items or services at no cost or at a reduced cost may be delivered to the winning patron in person; by mail or similar delivery service; or transmitted electronically using a message to the patron's wireless interactive device or as an entry in an account of the patron, such as a credit or debit card account, a wireless service provider account, or the like. In a preferred embodiment, credits or coupons are transmitted to the winning patron in conjunction with billings for such an account of the patron.

The responses of the participants are sent to a central processor (not shown) having a computer program stored and operative therein that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device 10 or a large screen display 40 remotely located from the fan. FIGS. 1 and 2. The processed information could be a compilation or tabulation of similar responses, as either a number or a percentage of total responses, a graphical representation in a bar chart, pie chart or the like, or a combined graphical and numerical representation of the data. The processing further may include categorization of participants' responses according to demographic character-

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istics, which might include the age or gender of the participant or his/her preferred team loyalty.

In addition to prizes that can be won by participating in the contests and polls described above, a number of other incentives are optionally offered to attendees to induce them to participate in the interactive aspects of the present invention. In one aspect, access to a chat room and instant messaging are provided to select persons, who are preferably all live entertainment event attendees. Participants may be enrolled by any suitable process, as delineated hereinabove. Messages may be exchanged interactively among the participants using any suitable protocol, such as cellular telephone text messaging and known systems used for instant messaging between Internet enabled personal computers and Internet-enabled wireless telephones, PCs, and PDAs. Optionally, enrolled participants are offered the chance to receive one or more newsworthy instant messages from a message sponsor, such as one of the participating teams in an athletic event, during the course of the live event. For example, at a sporting event such messages might provide condition reports on injured players or information on game strategy from expert commentators or coaches. In some embodiments, the chat room and instant message features are provided at no cost, while in others, a fee might be charged by the offering entity for the services. Other services optionally provided to enrolled participants might include user-selectable, on-demand instant replays and commentary concerning the live event; and cellular telephone ring tones associated with a sports team or other identifiable entity.

Other incentives optionally offered to induce spectators to participate include monetary considerations, discounts, or coupons redeemable for at least part of the cost of goods or services. Such forms of consideration may be physically delivered to a participant at the event venue or another location. Preferably, consideration is provided by electronic transfer using systems known in the art or as described elsewhere in this specification.

Still another incentive to participate is provided in implementations wherein food, beverages, goods, services, or the like can be ordered directly using the wireless interactive device. At virtually every live entertainment event, food and beverages intended for consumption during the event and merchandise thematically associated in some manner with the event are sold at various locations of the live event venue and by roving vendors. For example at a sporting event, the items offered may include wearing apparel bearing team logos, trademarks, or other indicia associated with a team or its players; related memorabilia such as souvenirs, posters, photographs, and recordings; and sporting equipment. Items sold at a concert or dramatic performance might include wearing apparel bearing indicia associated with the show or particular performers, programs, recordings, photographs, posters, or the like. The term "promotional merchandise" is often used generically for items marked with such logos; trademarks; images of players, performers, and event venues, especially those considered historically significant; and similar indicia. Other general interest items, novelties, tickets for future events, and the like are also sold.

In an implementation, participants use the wireless interactive device to place orders for the aforementioned goods and services. Advantageously, the interactive querying and contest aspects of the present method provide an impetus for users also to give attention to advertising that urges the purchase of goods and services. For example, such advertisements may interspersed with questions and contests, enhancing the likelihood that a patron will be motivated to make a purchase. In an embodiment, advertisements pro-

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moting the items are stored in a transaction server or recording system in data communication with the wireless communication system. Advertisements are selectively or generally transmitted by the wireless system for output by the user output interface of each interactive device.

The user enters an order for desired items or services using the user input interface, such as the keypad of a cellular telephone or PDA. In an implementation, the order is transmitted to the wireless communication system and routed to an order fulfillment server system. A computer program stored and operative therein receives the orders and communicates them to a provider of goods and services for order fulfillment. Physical goods, such as food and beverage, promotional merchandise items, and souvenirs may be delivered to the patron's seat, made available for pickup at a predetermined location within the live event venue, or shipped to another appointed location. In some embodiments, the wireless interactive device incorporates circuitry, such as global positioning system (GPS) technology, whereby the device may be localized sufficiently to allow the provider to determine a patron's physical location and thereby effect direct delivery of items to the patron. Alternatively, the user may enter a seat location either as part of the order entry process or at an earlier time, e.g. during enrollment in the aforementioned chat room and instant messaging services. Intangible items or services, such as tickets to future events or coupons redeemable for other items or for reduced prices, may be provided by similar forms of delivery or communicated electronically using known techniques. Optionally, a text message or other message confirming the order is returned to the purchaser for output using the wireless interactive device. Preferably, monetary consideration for purchased goods or services is provided by electronic transfer of funds between bank accounts or by charges billed to a user, such as to a user's conventional debit or credit card or wireless service provider account. Consummation of transactions using other forms of payment known for electronic processing may also be used and are to be considered within the scope of the method of the invention. In one embodiment, the present system is connected to an electronic financial network of a type known in the art. Transfer of funds from the network provides monetary consideration to the provider for the goods and services received by the ordering participant.

In one embodiment, a menu of items available for purchase is transmitted upon the user's request to the interactive device. A hierarchical arrangement of a known sort including submenus may be used in situations wherein more items are available than can be accommodated within the confines of output displays of extant interactive devices. Preferably the items offered include at least food, drink, souvenir merchandise, and tickets for future events. In order to place an order, a user navigates using the input interface through the menus to select one or more items for purchase. The user may further enter location or other identifying indicia, such as a unique seat number or other reference number by which correct delivery may be effected. A credit card, bank account number, prepaid account number, or other similar reference by which money is electronically credited to the vendor in payment for the items ordered is also entered. Alternatively, any mechanism for effecting electronic payment known in the relevant art is used. As is well understood by those skilled in the art, even the limited hardware display and processing capacity of present cellular telephones, PDA's, and pagers is sufficient to accommodate the aforementioned menu and ordering method. However, as time moves on, much higher text densities and graphics resolution will

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likely become commonplace in such devices and allow ever-increasing functionality to be provided and used in the method of this invention. As hierarchical menu systems have become ubiquitous with the advent of automated teller machines and windowed graphical user interfaces on modern personal computer operating systems, the concept and the method of their use are familiar to many persons and will not be further described here.

The use of electronic ordering and payment facilitates sales made in accordance with the present method. Items can be ordered by patrons from their seats at any time and timely delivered, without the need to wait for the unpredictable arrival of a roving vendor who may not even be carrying the item desired. Food and beverage items carried by the roving vendor are often not maintained at a temperature that is pleasing to the patron, i.e. cold items have warmed up and hot items have cooled excessively. The confusion of having to communicate an order in the often-noisy environment of a sports stadium is eliminated, as is the inconvenience of passing money in payment and change, possibly across many patrons between the customer and the closest aisleway. In addition to use of common credit and debit cards as means of payment, corporate accounts and billing through third party accounts such as the customer's Internet service provider or cellular telephone service provider are readily effected in a transaction processed in accordance with the present method.

In addition, other services are optionally offered, such as restaurant, lodging and transportation reservations, biographical and recording data for athletes, concert artists, and other performers, future schedules of events, and myriad other information. This information can be conveyed visually, audibly, or via a combination of both media forms. The offerings presented through the wireless interactive device may be complemented by messages simultaneously displayed on scoreboards, video monitors, or the like to enhance their ability to garner the audience's attention.

Yet another aspect of the invention allows participants to interactively participate in auctions, which may be of any type commonly known, including conventional auctions wherein items are sold to the lowest bidder; Dutch auctions, in which one or more items are offered at a fixed price to the first bidder or preselected maximum number of bidders; a reverse auction, in which the price of an item is lowered in response to a large number of bids received; and other forms. The goods or services offered in such auctions preferably are related thematically to the live entertainment event but may also include any goods or services of interest to the participants. The auctions are conducted by disseminating a description of the goods or services offered to the participants through one or more of the modes discussed hereinabove for the dissemination of the contest queries of the invention. Participants enter their bids or related responses by using the user input interface of their wireless interactive devices. Such auctions conducted at a live entertainment event in accordance with the invention beneficially evoke a high level of interest due to the level of enthusiasm and excitement typically evident at a live event.

Preferably, the opportunity to participate in the various interactive features of the present method and system, along with eligibility for the various prizes and other incentives, are offered to substantially all the persons at the live entertainment event. However, participation in some or all features may be limited to some subset of the persons physically present at the event.

FIG. 3 depicts one implementation of the system 100 of the invention. A wireless communications system 105 pro-

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vides service to cellular telephones, wireless PDA's, and Pocket PC's. Wireless interactive devices used with the system are a plurality of cellular telephones 110 and served by cellular telephone provider 112 through signals transmitted and received at antenna 114. Wireless PDA's 116 are served by wireless PDA service provider 118 through signals transmitted and received at antenna 120. A wireless local area network 122 transmitting signals in accordance with IEEE Standard 802.11 from antenna 124 serves wireless Pocket PC's 126. Each of cellular telephone provider 112, wireless PDA service provider 118, and wireless local area network 122 communicates through the Internet 128. Promotional message server 130 selects promotional messages which are transmitted via the Internet to wireless communications system 105 and broadcast to interactive devices 110, 116, and 126. Promotional messages are also transmitted to stadium display 132, which includes a controller operative to receive digital information, e.g. information received via the Internet, and convert it into corresponding textual, graphic, or video displays for presentation. Central processor 134 provides queries displayed on display 132. Answers to such queries are entered on the user input interfaces of interactive devices 110, 116, and 126 and received by distributed receiving servers (not shown) maintained by each of cellular telephone provider 112, wireless PDA service provider 118, and wireless local area network 122. The distributed receiving servers accumulate the answers and transfer them by Internet to central processor 134 for processing into results, which are then communicated and displayed by display 132. Order processing server 136 receives orders for goods and services entered by participants using their wireless interactive devices and communicates those orders to one or more providers 138 of goods and services, such as food/beverage vendors. Connection 140 to electronic financial network 142 enables the electronic transmission to providers 138 of monetary consideration for the goods and services they furnish. It will be understood by those skilled in the relevant art that the functions of the plural servers alternatively may be shared among a smaller number of servers or may be accomplished by central processor 134. The plural servers also may be in data communications via the Internet or a local network implemented using connections by wire, wireless, or optical data transmission, in any way conventional in the art. Other networking protocols suitable for the interchange of digital information may also be used.

Having thus described the invention in rather full detail, it will be understood that such detail need not be strictly adhered to, but that additional changes and modifications may suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What is claimed is:

1. A method for enabling interactive participation at a live entertainment event held at a live event venue and attended by a plurality of persons at said venue, at least a portion of said persons being participants employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface, the method comprising the steps of:

providing a wireless communication system for transmitting and receiving messages with said interactive device;

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enrolling a plurality of said persons as said participants; querying said participants to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device; receiving answers entered by said participants; transferring said answers to a central processor; and processing said answers into results using said central processor; and wherein said wireless interactive device further comprises localization circuitry for transmitting a physical location thereof, said method further comprises the step of detecting said transmitted location, and said enrolling step is effected automatically for devices wherein said transmitted location is within said live event venue.

2. A method as recited by claim 1, further comprising the step of disseminating at least one promotional message to said participants.

3. A method as recited by claim 2, wherein said promotional message is displayed on said user output interface.

4. A method as recited by claim 2, wherein said promotional message is disseminated for monetary consideration from an advertiser.

5. A method as recited by claim 2, further comprising collecting demographic characteristics of at least a portion of said participants.

6. A method as recited by claim 5, wherein said promotional message is selected based on said demographic characteristics of said participant.

7. A method as recited by claim 1, wherein said transmitting is carried out using at least one of telephone, e-mail, interactive registration through an Internet site, regular postal mail, and a kiosk or terminal at said live event venue.

8. A method as recited by claim 1, wherein said enrolling comprises transmission of a text message from said wireless interactive device.

9. A method as recited by claim 1, wherein said request comprises entry of an activation code using said user input interface of said wireless interactive device.

10. A method as recited by claim 1, wherein said enrolling is terminated upon the departure of said participant from said live event venue.

11. A method as recited by claim 1, wherein said enrolling expires after a predetermined time period.

12. A method as recited by claim 1, wherein a unique signature is associated with each of said wireless interactive devices and is transmitted therefrom.

13. A method as recited by claim 12, wherein said unique signature comprises indicia entered into said wireless interactive devices using the user input interface thereof.

14. A method as recited by claim 13, further comprising the step of providing an entry ticket to each of said persons for entry to said live entertainment event, said entry ticket bearing unique identifying indicia appointed to be entered into said interactive device, and said unique signature contains coding corresponding to said indicia.

15. A method as recited by claim 12, further comprising the step of conducting an auction of goods or services, wherein participants submit bids entered using said user input interface.

16. A method as recited by claim 12, further comprising the steps of soliciting a purchase of goods or services by said participants; accepting orders for said purchase entered by said participants using said user input interface, transmitted by said interactive device; and submitting said orders to a vendor for fulfillment for monetary consideration.

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17. A method as recited by claim 16, wherein said goods comprise at least one item of food, beverage, and promotional merchandise.

18. A method as recited by claim 16, wherein said goods or services are delivered using said unique signature to locate said participants in said live event venue.

19. A method as recited by claim 16, wherein said interactive device further comprises localization circuitry and transmits a position obtained from said localization circuitry and indicia identifying said device, and said position and indicia are used to effect delivery of goods to said participant.

20. A method as recited by claim 1, further comprising the step of offering at least one incentive to induce said persons to become said participants during said live entertainment event.

21. A method as recited by claim 20, wherein said incentive comprises the dissemination of at least one instant message to said participants during said live entertainment event.

22. A method as recited by claim 20, wherein said incentive comprises a chat room in which participation is limited to said participants.

23. A method as recited by claim 20, wherein said incentive comprises conveying to said participant at least one of goods, services, or coupons redeemable for at least part of the price of goods or services.

24. A method as recited by claim 20, wherein said incentive comprises electronic transfer of consideration to said participant.

25. A method as recited by claim 1, further comprising the step of relaying informational items, said items being transmitted by said wireless communication system to said wireless interactive device for output using said user output interface.

26. A method as recited by claim 25, wherein said informational items contain event-related content.

27. A method as recited by claim 25, wherein said informational items comprise items selected from the group consisting of news reports, traffic condition reports, weather conditions, weather forecasts, sports news and scores.

28. A method as recited by claim 1, wherein said querying comprises a contest.

29. A method as recited by claim 1, wherein said querying comprises a game.

30. A method as recited by claim 1, wherein said querying comprises an opinion poll.

31. A method as recited by claim 1, further comprising the step of awarding a prize to at least one of said participants who has entered an answer in response to said querying.

32. A method as recited by claim 31, wherein said prize is delivered to said participant.

33. A method as recited by claim 31, wherein said prize is transferred electronically to said participant.

34. A method as recited by claim 1, wherein said querying is limited to a portion of said participants.

35. A method as recited by claim 1, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

36. A method as recited by claim 1, wherein said interactive device is a member selected from the group consisting of cellular telephones, two-way pagers, wireless personal digital assistants, and wireless pocket PC's.

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37. A method as recited by claim 1, wherein said wireless interactive device is Internet-enabled and at least a portion of the communications to and from said wireless interactive device is accomplished using the Internet.

38. A method as recited by claim 1, wherein said user output interface comprises at least one of an alphanumeric text display, a graphical display, and an audio output means.

39. A method as recited by claim 1, wherein said querying step is accomplished by at least one display visible to said participants.

40. A method as recited by claim 39, wherein said display comprises at least one of a scoreboard and a large-scale video display.

41. A method as recited by claim 39, wherein said live event venue includes at least one auxiliary area and said display is visible in said auxiliary area.

42. A method as recited by claim 1, wherein said querying step is accomplished by a notice audible to said participants.

43. A method as recited by claim 1, wherein said querying step is accomplished by a message transmitted by said wireless communication system to said interactive device and output by said user output interface.

44. A method as recited by claim 1, further comprising the step of announcing said results.

45. A method as recited by claim 44, wherein said announcing step is accomplished by a notice audible to said participants.

46. A method as recited by claim 44, wherein said announcing step is accomplished by at least one display visible to said participants.

47. A method as recited by claim 44, wherein said announcing step is accomplished by a message transmitted by said wireless communication system to said interactive devices and output by said user output interface.

48. A method as recited by claim 1, wherein said live entertainment event comprises multiple activities occurring simultaneously in different locations within a venue.

49. A method as recited by claim 1, wherein said live event venue is one of a museum, casino, shopping mall, theme park, agricultural fair or exposition, a trade show, and a convention.

50. A method as recited by claim 49, wherein said live event venue is a theme park.

51. A method as recited by claim 49, wherein said live event venue is a casino.

52. A method as recited by claim 1, wherein said live entertainment event comprises at least one activity having programmatic content with an identifiable duration.

53. A method as recited by claim 1, wherein said live entertainment event comprises activity that occurs substantially continuously during said event.

54. A system for enabling interactive participation at a live entertainment event held at a live event venue and attended by a plurality of persons at said venue, at least a portion of said persons being participants employing a wireless interactive device having capability (i) to receive and transmit messages, (ii) accept input via a user input interface, and (iii) output messages to a user output interface, the system comprising:

a wireless communication means for transmitting and receiving messages with said interactive device;

means for querying said participants to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device;

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means for processing into results said answers entered by said participants, received by said wireless communications system, and transferred to said central processor; and

means for announcing said results and

wherein said wireless interactive device further comprises localization circuitry for transmitting a physical location thereof, said system further comprises means for detecting said transmitted location, and means for automatically enrolling a plurality of said persons as said participants when said transmitted location is within said live event venue.

55. A system as recited by claim 54, wherein said wireless communications means comprises at least one wireless system operated by a wireless service provider.

56. A system as recited by claim 54, further comprising means for disseminating at least one promotional message to said participants through said user output interface of said interactive device.

57. A system as recited by claim 56, wherein said disseminating means comprises a promotional message server in data communication with said wireless communications system, said promotional message server providing said at least one promotional message from a plurality of messages stored in said promotional message server and sending said promotional message to said wireless interactive device through said wireless communications system.

58. A system as recited by claim 57, wherein said promotional message server employs demographic characteristics of said participants in selecting said promotional message.

59. A system as recited by claim 54, wherein said querying means comprises at least one display visible to said participants.

60. A system as recited by claim 54, wherein said announcing means comprises at least one display visible to said participants.

61. A system as recited by claim 54, further comprising at least one prize appointed to be awarded to at least one of said participants.

62. A system as recited by claim 54, further comprising an order processing server in data communication with said wireless communications means, said order processing server receiving orders for goods and services entered by said participants using said user input interface and communicating said orders to a provider of goods and services for order fulfillment.

63. A system as recited by claim 54, wherein said wireless interactive device is a member selected from the group consisting of cellular telephones, wireless personal digital assistants, wireless pocket PC's, and two-way pagers, said member being provided wireless access by said wireless service provider.

64. A system as recited by claim 54, wherein said wireless interactive device is Internet enabled and communicates therewith.

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65. A system as recited by claim 54, wherein said wireless interactive device incorporates circuitry for receiving broadcast informational items and said system further comprises a broadcasting system broadcasting said informational items appointed to be received by said wireless interactive device.

66. A system as recited by claim 54, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

67. A system as recited by claim 54, wherein said user output interface bears at least one of said query directed to said participants and said results.

68. A system as recited by claim 54, wherein said means for processing comprises a central processor including at least one general-purpose computer.

69. A system as recited by claim 68, further comprising at least one distributed receiving server in data communication with said central processor and said wireless communications system, and wherein a computer program stored in said receiving server receives said answers and transfers said answers to said central processor.

70. A system as recited by claim 68, wherein a computer program stored in said central processor is operative to process into results said answers entered by said participants.

71. A system as recited by claim 68, further comprising an order fulfillment server in data communication with said central processor, and wherein a computer program stored in said order fulfillment server receives orders for goods and services placed by said participants and communicates said orders to a provider of said goods and services.

72. A system as recited by claim 71, further comprising a connection to an electronic financial network by which monetary consideration is received for said goods and services provided to said participant by said provider.

73. A system as recited by claim 54, further comprising at least one visible display bearing at least one of said query directed to said participants and said results.

74. A system as recited by claim 73, wherein said visible display comprises a plurality of video monitors dispersed throughout said venue.

75. A system as recited by claim 73, wherein said visible display comprises a scoreboard visible to the participants in said venue.

76. A system as recited by claim 73, wherein said visible display comprises a large screen display visible to the participants in said venue.

* * * * *

EXHIBIT 15



US007263378B2

(12) **United States Patent**
Inselberg

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(54) **METHOD AND APPARATUS FOR
INTERACTIVE AUDIENCE PARTICIPATION
AT A LIVE ENTERTAINMENT EVENT**

(76) Inventor: **Eric Inselberg**, P.O. Box 833, Short
Hills, NJ (US) 07078

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of application No. 10/792,170, filed on Mar. 3, 2004,
now Pat. No. 6,996,413, which is a continuation-in-
part of application No. 10/378,582, filed on Mar. 5,
2003, now Pat. No. 6,760,595, which is a continua-
tion-in-part of application No. 09/854,267, filed on
May 11, 2001, now Pat. No. 6,650,903, which is a
continuation of application No. 09/656,096, filed on
Sep. 6, 2000, now Pat. No. 6,434,398.

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455/414.3; 463/36-42; 725/9; 705/27,
705/37, 3

See application file for complete search history.

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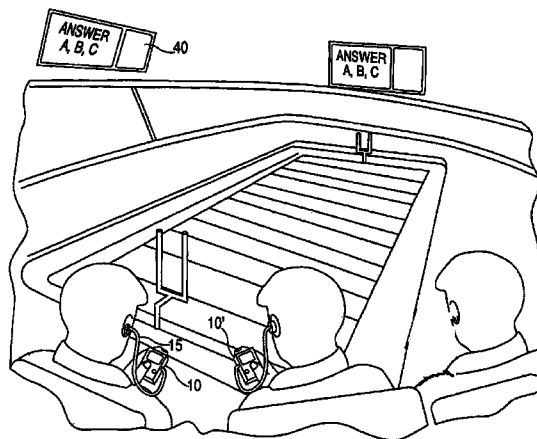
Primary Examiner—Jean Gelin

(74) *Attorney, Agent, or Firm*—Ernest D. Buff & Associates
LLC; Ernest D. Buff; Theodore J. Pierson

(57) **ABSTRACT**

A method and system provide interactive participation dur-
ing shopping activity occurring at a shopping venue. Enjoy-
ment for a plurality of enrolled participants is enhanced.
Participants employ wireless interactive devices that present
a promotional message and include user input and output
interfaces. Participants are queried, and enter answers via
the user input interface. The promotional messages are
preferably related to businesses associated with the shopping
venue.

54 Claims, 3 Drawing Sheets



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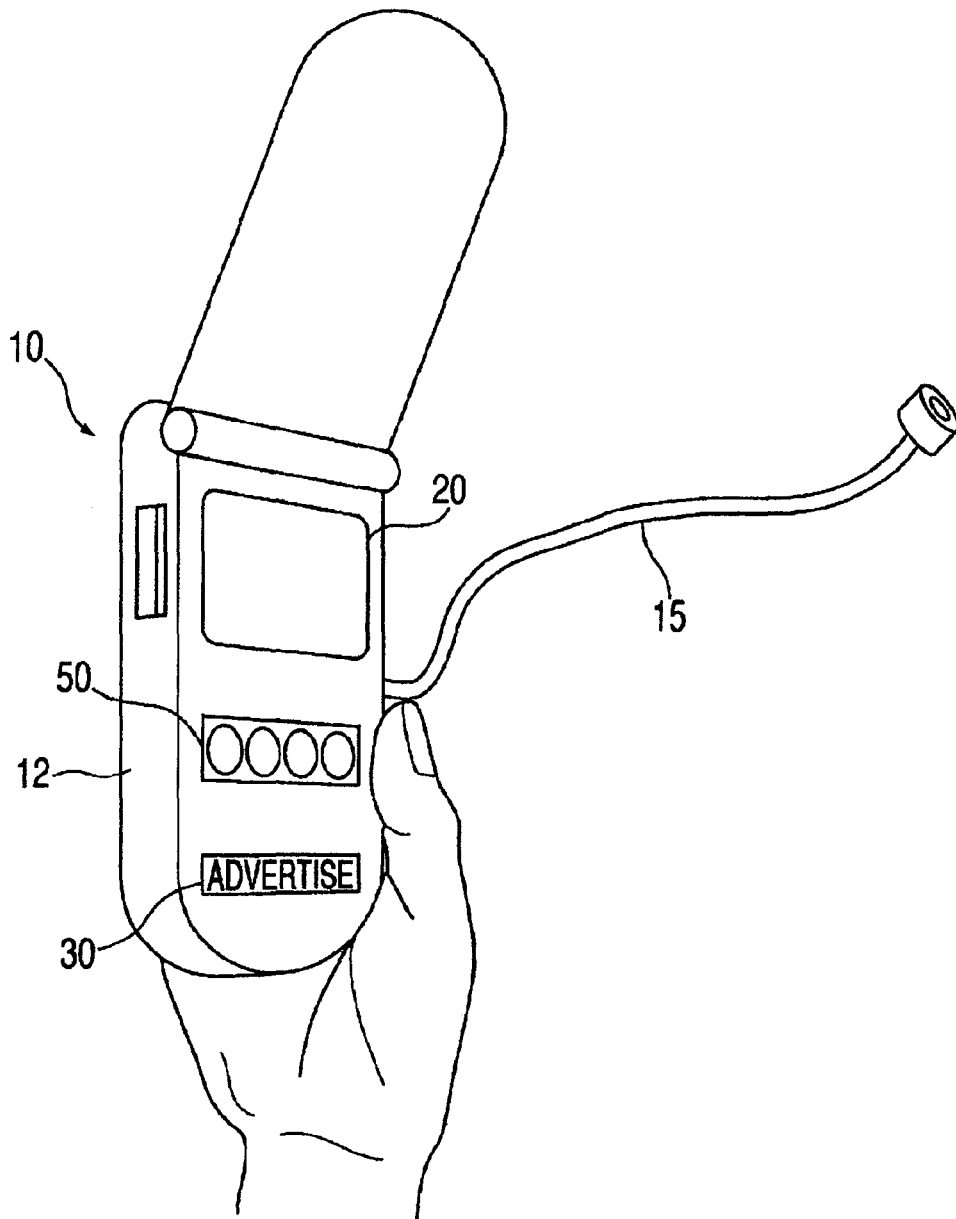


FIG. 1

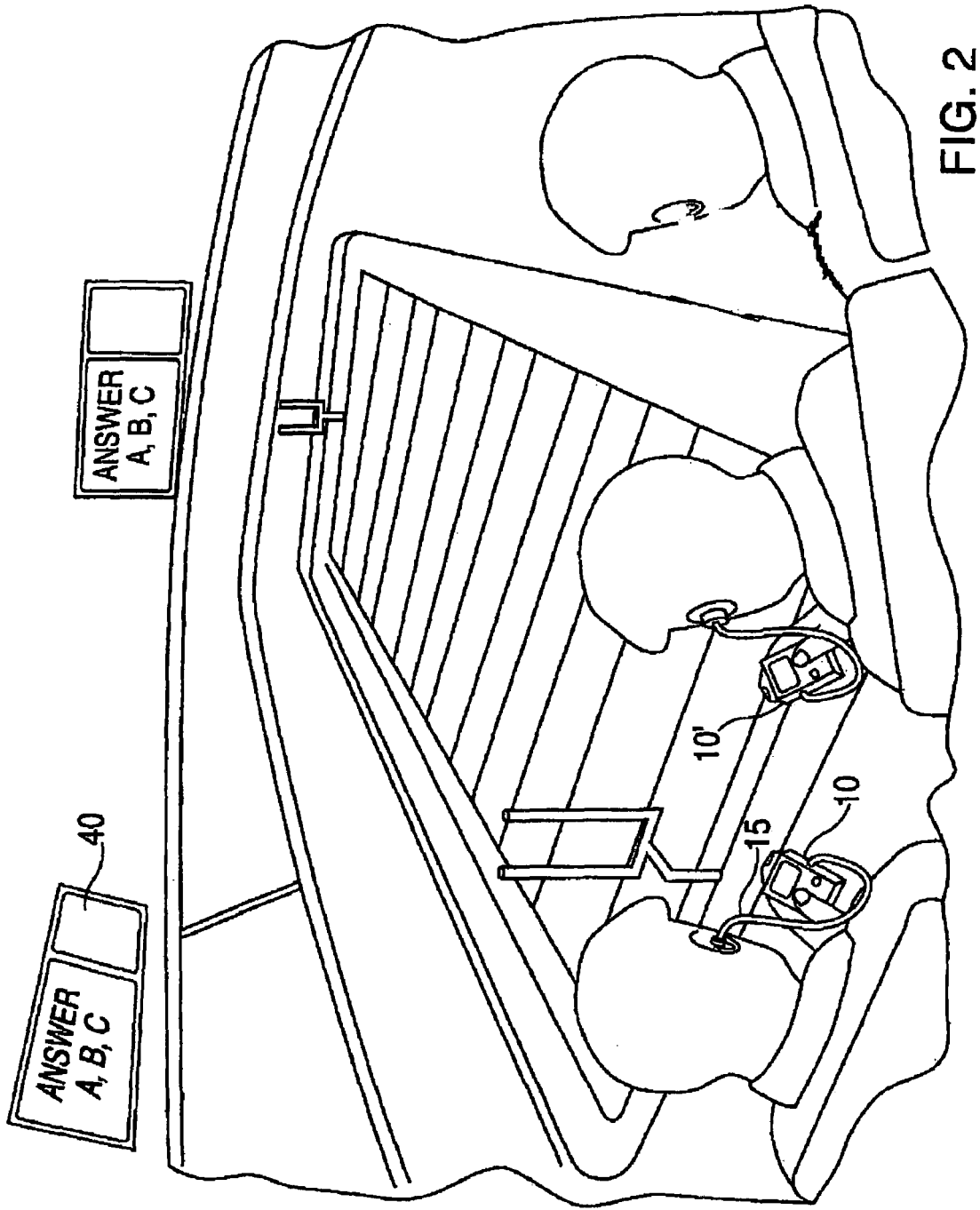
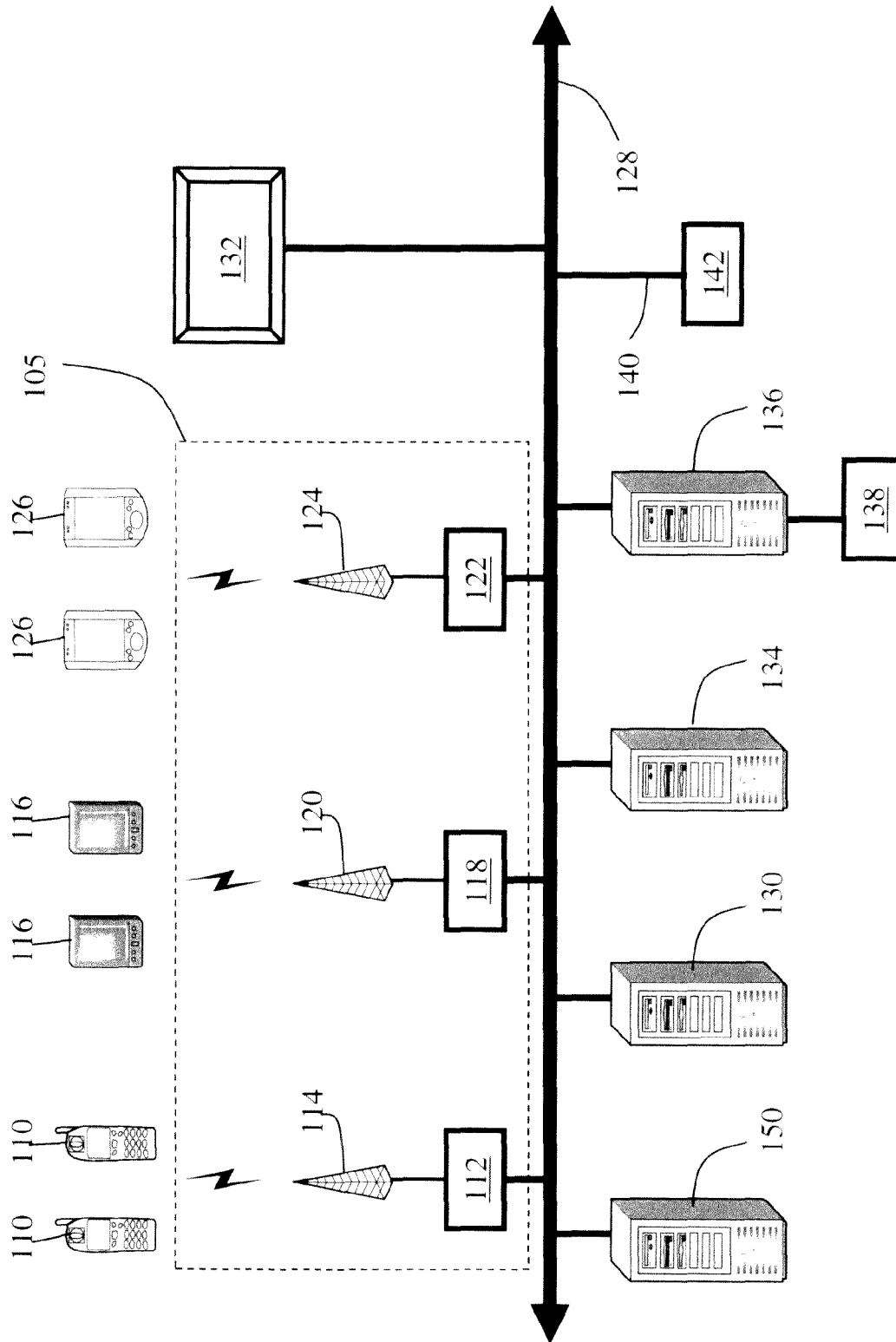


FIG. 3



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METHOD AND APPARATUS FOR INTERACTIVE AUDIENCE PARTICIPATION AT A LIVE ENTERTAINMENT EVENT

RELATED U.S. APPLICATION DATA

This application is a continuation-in-part of co-pending U.S. patent application Ser. No. 11/300,208, filed Dec. 14, 2005, which, in turn, is a continuation-in-part of U.S. patent application Ser. No. 10/792,170, filed Mar. 3, 2004 now U.S. Pat. No. 6,996,413, which, in turn, is a continuation-in-part of U.S. patent application Ser. No. 10/378,582, filed Mar. 5, 2003, now U.S. Pat. No. 6,760,595, issued Jul. 6, 2004, which, in turn, is a continuation-in-part of U.S. patent application Ser. No. 09/854,267, filed May 11, 2001, now U.S. Pat. No. 6,650,903, issued Aug. 18, 2003, which, in turn, is a continuation of U.S. patent application Ser. No. 09/656,096, filed Sep. 6, 2000, now U.S. Pat. No. 6,434,398, issued Aug. 13, 2002. Each of application Ser. Nos. 11/300, 208, 10/792,170, 10/378,582, 09/854,267, and 09/656,096 is incorporated herein in the entirety by reference thereto.

BACKGROUND OF THE INVENTION

1. Field of the Invention

The present invention relates to a system and method for interactive participation during shopping activity; and more particularly, to a system and method by which patrons at a shopping venue become enrolled and are afforded various opportunities to receive promotions and answer queries using wireless interactive devices, thereby enhancing the shopping experience and enjoyment.

2. Description of the Prior Art

Spectator events and, in particular, spectator sporting events have become a multibillion dollar a year business throughout the world. Millions of people attend their favorite sporting events, choosing among baseball, soccer, basketball, hockey, football, tennis, golf, auto racing, horse racing, boxing, and many others. Rather than merely watching sporting events on television, fans are willing to pay for the privilege of attending such events live in order to enjoy the spontaneity and excitement.

Audience reaction at live entertainment events is generally gauged informally on crowd volume. At certain events, limited amounts of information are shared with audience members using large screen displays such as those available from Sony Corporation under the trademark JUMBOTRON®. However, the opportunities for audience participation and useful or meaningful audience feedback are limited.

Marketing research has shown that audience members desire both an opportunity to participate in the spectator event and enjoy interactivity with other audience members. Informed audience members desire an opportunity to share their opinions with others. Heretofore, there has been no practical means to solicit the aggregate positions and the opinions of audience members at large venues (e.g., stadiums, arenas, race tracks, golf courses, theme parks, and other expansive outdoor/indoor venues).

Fans at live entertainment events have come to expect background information and detailed analysis from viewing televised sporting events at home and/or readily obtaining such information over the Internet. Further, audience members are becoming more and more accustomed to interactivity from their use of computer games, such as fantasy sports league games, that allow them to organize teams, determine game strategies and test their skill at managing a

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sports team. Accordingly, in order to continue attracting live audiences to attend these large venues, promoters have an incentive to provide audience members with an enhanced experience.

One example of a venue that would benefit from enhanced audience participation is major league baseball. The games last several hours, and audience members ordinarily spend most of their time in and around a reserved seat. When going to the concession stand or restrooms, the fan misses part of the game. Further, opportunities for interaction and expressing one's opinion are typically limited to cheering or jeering. Occasionally, a single fan or a few fans are selected to participate in a contest, such as a trivia contest, but these opportunities are extremely limited. Nearly every fan has an opinion about how the game should be played, and would like an opportunity to express his or her opinion. Ideally, fans would like to be recognized for their skill and knowledge concerning individual teams and/or winning strategies. Fans also desire to express opinions concerning facilities, sponsors, players, management and concessions. Being able to voice an opinion, and comparing the opinion to that of other fans, would enhance the overall experience. Also, this kind of information can be useful to management by helping it determine the kind of services that fans desire.

Additionally, an often-heard complaint from fans is that they missed some of the action because they could not see or did not know precisely what was happening. For example, any particular seat location affords its occupant only a single view of a playing field. In addition, some locations fail to offer an unobstructed view of the entire field. On other occasions a technical ruling made by a game official is not fully explained to those in attendance but is extensively analyzed by television and/or radio announcers, often with one or more instant replays of the event in question. Fans commonly resort to carrying conventional portable radio and TV receivers to games, whereby they obtain game commentary, instant replays, and the like to complement what they directly observe or obtain from the stadium's own announcers, scoreboards, and video displays.

It is also noted that spectators commuting to and/or from events do not have ready access to desirable information such as sports related information and other information such as traffic and weather reports.

The foregoing considerations apply to additional forms of entertainment that are associated with specific and defined programmatic content having an identifiable duration, such as the content provided by an athletic event, a musical or theatrical performance, or the like. Similar enhancements are also sought in connection with forms of entertainment that do not entail specific programmatic content. For example, persons patronize museums, casinos, shopping malls, theme parks, agricultural fairs or similar expositions, trade shows, conventions, or the like recognize entertainment value, whether or not such situations and activities include specific programmatic content having a generally defined duration as part or all of their experience.

Accordingly, there remains a need for a method and system that provides interaction that heightens the enjoyment experienced by participants in any of the aforementioned forms of entertainment.

SUMMARY OF THE INVENTION

The present invention relates to a method and apparatus for enhancing the experience of persons during shopping activity by providing interactivity. In a preferred embodiment of the invention, there is provided a method for

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enabling interactive participation by enrolled participants during shopping activity occurring at a shopping venue patronized by a plurality of persons. Each enrolled participant employs a wireless interactive device having a unique signature associated therewith and capability to: (i) receive and transmit messages; (ii) accept input via a user input interface; (iii) output messages to a user output interface; and (iv) transmit the unique signature. The method comprises the steps of: (i) enrolling at least some of the persons as enrolled participants, each being equipped with one of the wireless interactive devices; (ii) providing a wireless communication system adapted to transmit and receive messages with the interactive device; (iii) querying the enrolled participants to respond to at least one query with an answer entered through the user input interface and transmitted by the interactive device; and (iv) receiving answers entered by the enrolled participants. By having and using such a wireless interactive device, enrolled participants can receive promotional messages, which preferably provide announcements and solicitations that enhance the shopping experience. The interactive device is preferably a wireless, hand held device, having user input and output interfaces. The user input interface preferably comprises at least one member selected from the group consisting of a keypad, selection buttons, a touch screen, a rotatable dial, cursor keys, a pointing device (e.g. a mouse or trackball), and a voice recognition system. The user output interface preferably comprises a visible display for alphanumeric, textual, or graphic images and audio output means such as a speaker or earphone. Preferably the device is a cellular telephone, two-way pager, or wireless personal digital assistant (PDA) or pocket PC. It is further preferred that the device be Internet enabled, and that the wireless communication system employ the Internet in the bidirectional communication of data. Alternatively, the interactive device may be a special-purpose device incorporating at least the features needed for the practice of the present method. Communication protocols other than the Internet may alternatively be employed to provide the desired interactive communication. The device is easily transported, permitting the participant to carry and use it readily throughout attendance in the venue.

In an aspect of the invention, contests and polls may be conducted. Preferably these forms of querying are related to merchants operating in the shopping venue and to goods and services they provide. Using simple input devices, such as arrow keys and an enter key, a touch screen display or a numeric keypad, the participant selects from a list of promptings and/or possible answers. Prizes may be offered. The degree of attention and receptivity accorded to promotional messages and advertisements received by patrons using an interactive device during shopping activity in accordance with the present method is beneficially increased. The combination of the atmosphere of the shopping venue and the immediacy of the interactive content frequently heightens the degree of interest of participants for proffered advertisements over that accorded by those who receive advertising in more traditional forms.

Practice of the present method affords particular advantages for purveyors of services that are offered to individuals or small, predefined groups of persons either at appointed times or when service becomes available, such as restaurants, health clubs, hairstylists, and the like. More specifically, the method provides for dissemination of promotional messages that include: (i) a solicitation for enrolled persons to make a reservation for provision at a future time of a desired service; and (ii) a notification thereafter of the availability of the desired service. The solicitation may

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further include dissemination of a menu of available services, such as food and beverages, whereby an order can be entered and prepared for later delivery. Such arrangements are preferably made by exchange of text or other similar message forms.

Another aspect of the present invention provides a system for enabling interactive participation by enrolled participants during shopping activity occurring at a shopping venue patronized by a plurality of persons. Each enrolled participant employs a wireless interactive device having a unique signature associated therewith and capability to: (i) receive and transmit messages; (ii) accept input via a user input interface; (iii) output messages to a user output interface; and (iv) transmit the unique signature. The system comprises: (i) means for enrolling at least some of the persons as enrolled participants, each being equipped with one of the wireless interactive devices; (ii) a wireless communication means for transmitting and receiving messages with the interactive device; (iii) means for querying the enrolled participants to respond to at least one query with an answer entered through the user input interface and transmitted by the interactive device; and (iv) means for receiving answers entered by the enrolled participants. Preferably, the wireless communications system is provided by a cellular telephone network.

BRIEF DESCRIPTION OF THE DRAWINGS

The invention will be more fully understood and further advantages will become apparent when reference is had to the following detailed description of the preferred embodiments of the invention and the accompanying drawings, wherein like reference numeral denote similar elements throughout the several views and in which:

For the purpose of illustrating the invention, there is shown in the accompanying drawings a form which is presently preferred; it being understood that the invention is not intended to be limited to the precise arrangements and instrumentalities shown.

FIG. 1 is a perspective view of a hand held device used in connection with the interactive participation system of the present invention;

FIG. 2 is a schematic diagram of participants at a spectator event utilizing the interactive participation system of the present invention; and

FIG. 3 is a schematic diagram of a system of the invention for enhancing participant enjoyment and interaction.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

One representative embodiment of the present invention provides a method of enabling interactive participation at a live spectator event by a plurality of participants employing a wireless interactive device. The interactive participation enhances the enjoyment of such participants at a live event transpiring at any form of entertainment venue. Preferably, the method involves enrollment of persons desiring to partake of the features and benefits conveyed by participation.

Some forms of entertainment are associated with specific and defined programmatic content having an identifiable duration, such as the content provided by an athletic event, a musical or theatrical performance, or the like. On the other hand, entertainment may be provided to individuals as a consequence of patronizing a museum, casino, cruise ship, shopping mall, theme park, agricultural fair or similar expo-

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sition, a trade show, convention, or the like. Persons present on a college or university campus also experience such entertainment. The entertainment provided in such situations and activities may or may not include specific programmatic content having a generally defined duration as part or all of the activity. In some instances, the totality of entertainment activities has a duration bounded by opening and closing hours of a museum, mall, park, fairgrounds, convention hall, or the like. In other forms of entertainment, e.g. at casinos, activity often continues around the clock. It is to be understood that the present invention relates to entertainment forms either with or without the foregoing specific programmatic content and defined duration. For entertainment forms without defined duration, the present activity is bounded, with respect to any particular individual, by that individual's active or passive participation in any form of entertainment, instruction, promotion, or other conduct of the ordinarily associated with the particular type of venue.

For example, at a trade show, an attendee is normally provided with commercial or technical information or promotion of goods or services offered by exhibitors at the show. It is to be understood that dissemination of such information or promotion constitutes entertainment within the meaning of that term as used herein, and the duration of the event is understood to be defined generally by the attendee's presence at the venue. Similarly, a casino is often associated with a venue that includes a gaming area in which persons engage in any of a variety of games of chance or gambling, as well as other appurtenant areas providing restaurants, shops selling various forms of merchandise, theaters or auditoriums (e.g., providing live stage entertainment or activity), public gathering areas, and hotel accommodations.

The principles of the present system and method also find application in venues of yet other types. For example, shopping is perceived by many as being a form of entertainment, in that such persons find diversion, amusement, or otherwise agreeable occupation in such activity, transcending the mere utilitarian function of acquiring essential or desirable articles. Such activity is especially enjoyed in the context of large shopping venues, such as large, freestanding stores known as "big box" stores, and large department stores offering many diverse types of merchandise and services. Shopping malls or centers in which are situated a plurality of individual stores are venues even more attractive to some. These facilities may comprise one or more large indoor buildings including plural stores with interior access, or a plurality of buildings connected by exterior or interior walkways. Either indoor or outdoor entrances may provide access to individual stores.

Large malls now frequently provide a multitude of different experiences beyond retail sales of goods, including, for example, restaurants, movie theaters, auditoriums, or public spaces for artistic or cultural events. At least one large shopping center even houses an indoor theme park with various amusement rides and the like. Ordinarily, shoppers are free to come and go at a shopping venue without admission charge or control. However, certain entertainment events or other functions or amusements therein may require an admission fee.

It is also to be understood that the activities and events for which the present method is suited, whether or not they involve events having defined programmatic content, typically extend beyond narrowly defined temporal and spatial limits. For example, live entertainment events often occur in a building with defined entrances or an indoor or outdoor area demarcated by fences or other barriers with defined

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points of entry that may comprise gates, turnstiles, or the like. Many live events take place in a stadium, arena, or auditorium having defined spectator seat locations, e.g. seats uniquely denoted by section, row, and seat numbers or the like. In addition to the actual performance area (such as a playing field or concert stage) and the appointed spectator area, event facilities ordinarily have auxiliary or appurtenant public areas associated therewith. Such areas provide facilities and services that are desirably or essentially associated with the live entertainment event. The auxiliary areas are generally adjacent or in close proximity, and may include non-exclusively: ticket windows; passageways; rest rooms; clubs; restaurants; concession stands selling food and beverages; lounges; overflow areas with audio and/or video links to the principal event area; shops selling souvenirs, promotional merchandise, novelties, or related items; and service facilities such as parking lots and stations for public transportation; and the like. For example, patrons at an athletic event frequently engage in social activity in a venue's parking lot before or after the event, often including the consumption of food and beverage, a practice commonly known as "tailgating." Such activity bears a clear thematic relationship to the athletic event itself, since there is ordinarily extensive conversation about the event, the competing teams or players, or the like. Similar activity is common in connection with concerts and other live spectator events as well.

Similar considerations also apply to shopping activity at a shopping venue. As discussed above, the shopping experience comprehends more than just retail purchase of specific items and the particular spaces devoted thereto. Rather, shopping centers also typically have auxiliary or appurtenant public areas, providing facilities such as restaurants, movie theaters, recreational areas, auditoriums, hotels, or public spaces for artistic or cultural events, as well as parking lots.

It is thus to be understood that the term "venue" as used herein with respect to the activities and events discussed above, whether or not they include specific programmatic content and defined duration, extends to a penumbra defined by its relationship to such activities and events. Participation in the present interactive method may be afforded to persons in the primary area of the activity as well as in any of these penumbral locations, all of which are to be understood as collectively included in the term "venue" as used herein. Such auxiliary areas of a venue as parking lots, lawns, walkways, and the like are to be understood as included as well. It is also to be understood that the present interactive participation may involve activity at any location within the venue.

Referring now to FIG. 1, there is shown one form of a hand held, interactive device 10 adapted for use in connection with the interactive participation system of the present invention. In one embodiment, device 10 is employed by audience members at a sporting event as shown in FIG. 2. The device is adapted to communicate bi-directionally with a wireless communications system operative at the event, to provide information to a user, and to accept entry of information through a user input interface for transmission to the wireless communications system. In a preferred embodiment the device 10 includes a housing 12 with an electronic display opening. An electronic display (visual display) 20 providing one form of user output interface is preferably mounted within the housing and is visible through the electronic display opening therein. The electronic display may be of many types, e.g. employing liquid crystal or electroluminescent displays. The electronic display is in electrical communication with a local microprocessor

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mounted within the housing. A transceiver in electrical communication with the local microprocessor allows for the transmission and receipt of data from a wireless communications system connected to a central processor (not shown) in a manner known in the art. The electronic display is adapted to output information received from the local microprocessor, such as graphic or textual messages that ask the participant to answer a question, provide an opinion, or convey other important information. It is contemplated that data in the form of audio messages could be sent to the user in lieu of or in addition to the visual display. The visual display may be limited to presenting alphanumeric messages, but more preferably is capable of displaying graphical, pictorial, or streaming video input at various scan rates, preferably in real time. Keypad **50** accepts user input for transmission to the central processor.

In another aspect of the invention, the interactive device is optionally used by participants to receive audible or video programming, which may be transmitted in the commercial AM or FM broadcast band or at any of a number of predetermined frequencies in the RF, VHF, UHF, or microwave frequency bands. The transmission may be analog or digital. Programming may also be transmitted optically, such as by modulation of an infrared emitting source located in the venue and received by a complementary photoreceptive element in the wireless interactive device and suitably processed for intelligible output. Optionally, the device also comprises means for receiving and displaying video signals such as from ordinary broadcast television stations. Transmission of such program content may be done via conventional commercial broadcast stations or with low power transmitters intended only to cover the immediate event venue. Transmitters are optionally located either within the venue, in its environs, or in any other location that permits a sufficiently intense signal to be present in the venue. In a preferred embodiment device **10** incorporates circuitry to receive the aforementioned audio or video program content. The circuitry is adapted to receive the content and present it to the user. An earpiece **15** is preferably included to allow the user to listen to the audio content associated with the device without annoying others nearby. It is noted that other listening means could be employed such as earphones, speakers, or the like.

In other embodiments the aforesaid audio or video programming may be transmitted via any computer network to which the interactive device is connected, such as by streaming audio or video transmitted via the Internet, in accordance with presently employed protocols or other suitable protocols.

Such audio or video programming preferably comprises information or program content that is thematically pertinent to the event or venue or provides content otherwise useful to the participants. For example, on a university campus, such material might include news relating to the institution's athletic teams or other cultural or intellectual events in the life of the university community. At a shopping mall, the content might include shopping promotions or announcements or coverage of other entertainment occurring on the premises. The content may include descriptions of the action at the event, related expert commentary or instant replays. The content optionally includes other information of interest to participants, such as news and traffic reports and weather conditions and forecasts. Furthermore, the audio or video programming may include dissemination of questions or other matter incident to contests and polls conducted in accordance with the invention.

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It is contemplated that special purpose devices such as the aforementioned interactive device **10** optionally be made available to enable participation by persons who do not carry a conventional wireless device such as a cellular telephone, two-way pager, personal PC, or PDA. Units possessing the required wireless communications capability, electronic display, and user input and output interfaces are easily assembled using off the shelf components, such as transceivers, displays, keypads, and microprocessors, and other miscellaneous electronic components. These special devices would preferably be prepared for each event at one or more locations, having battery charging and menu programming capability, and transported to kiosks or otherwise made available near public entry points in the venue. The kiosks would each be either sales locations or rental contract stations to secure deposit and payment terms (cash, credit/debit card, etc.), for furnishing the special devices to persons desiring to participate prior to start of the event, and collection of rented special devices after conclusion of the individual's participation. Optionally, such a device is provided to at least selected participants without charge or as part of the price of admission or, alternatively, as an optional item rented or purchased by the participant, and preferably subsidized by the promotional messages.

In another aspect of the invention, and more preferably, general-purpose wireless devices such as those routinely possessed and used by members of the public, are used for the aforementioned interactive communication. Preferably the wireless devices are selected from the group consisting of wireless personal digital assistants (PDA) and Pocket PC's; two-way pagers; and cellular telephones. Such devices normally incorporate input means such as keypads, selection buttons, and touch screens, and video and audio output means such as display screens, speakers, and earphones. The devices typically include circuitry, such as a local microprocessor, adapted to convert wireless input into forms presented by the output means and to accept user-entered input that is converted for wireless output in a manner known in the art. Many of these devices are also Internet-enabled, that is to say, able to send and receive textual or graphic data in protocols which are commonly associated with Internet technology and able to be processed suitably by routers, servers, and other ancillary equipment used in Internet communication. Additionally, such devices frequently have the capability of sending and receiving electronic mail and Internet-based instant messages which may be transmitted worldwide over the Internet. Suitable PDA's include wireless units sold under the PALM™ tradename by Palm Computing and under the BLACKBERRY™ tradename by Research in Motion. Wireless Pocket PC's e.g. those sold by Hewlett Packard, Compaq, and Dell, are also suitable.

Known user-supplied wireless interactive devices are ordinarily equipped with either software or hardware features that provide a unique signature or identification of each device, e.g. the telephone number of a cellular telephone or the IP address of an Internet enabled device. The aforementioned special-purpose devices are also provided with unique identification. Both the special-purpose devices and the user-supplied general-purpose devices are adapted to transmit the unique signature for identification purposes.

The present method preferably employs at least one unique signature of each wireless interactive device, whereby a given participant's entries and responses may be individually attributed and tracked and the various interactive features described herein may be individually or collectively implemented. In addition, an electronic account is

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frequently associated with each user-supplied device for charges and credits. In some of the embodiments of the present invention, charges are levied for goods and services provided and transferred to the account associated with each device. Likewise, monetary credits, coupons, and the like can be disseminated either electronically to the account or by mail to an address associated with the account.

In addition, it is preferred that information establishing each participant's location within a venue also be associated with that user's device. The association can be effected in many ways. Preferably, a given user is provided during the enrollment process with one or more identifying indicia that can be entered using the user input interface of the device and included in the unique signature transmitted by the device. For example, participants may be provided with indicia distributed beforehand or upon a request that is entered through the wireless device, e.g. through wireless connectivity to the Internet. Indicia may be provided by regular mail, e-mail, telephone text messaging, by connecting with an appointed Internet site, or any other suitable means. The foregoing features by which users are individually identifiable also permit the various services offered selectively to qualified, appropriate, or interested participants or groups of participants.

Many of the wireless devices useful in connection with the present system, such as cellular telephones, now include localization circuitry. One form of such circuitry relies on global positioning system (GPS) technology. The device is thereby enabled to determine its geographical position quite accurately and transmit a position identification signal under appropriate circumstances. In an aspect of the invention, the present system includes location-receiving circuitry, such as that provided by a wireless service provider, capable of receiving position identification signals from a wireless device and thereby determining whether a particular wireless device is within a preselected, geographically delimited operational zone. For example, this functionality is optionally used to ascertain whether a given device is on the premises of a venue such as a shopping center, a university campus, or a theme park.

As there are many suitable alternatives on which to base an embodiment of the current invention which are known to those skilled in the art, the specific interactive device and wireless communications technology used, the specific multiple access communication protocol used, and the specific client/server hardware interface and protocol are not important to the method of the invention so long as they support the required functions. What is important is the method of this invention by which the customer is provided better service.

A number of currently used communications protocols suitably provide connectivity between several of the aforementioned user devices and a wireless communications system. One presently preferred protocol is provided by the commercial cellular telephone network. Many wireless or cellular telephones currently operative with these networks incorporate provisions for sending and receiving textual messages and graphic images, and for exchanging electronic mail through the Internet. Improved capabilities for wirelessly transmitting streaming video at various scan rates are rapidly being developed and are useful in the practice of the present method. Current cellular telephone systems provide various forms of instant messaging capability also useful in transmitting and receiving the queries, advertisements, and the like used in the present method. Messaging in accordance with the Short Message Service (SMS) protocol is

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presently preferred, but other forms of messaging are also contemplated within the present invention.

The bidirectional wireless communications used in the practice of the present method and system are preferably implemented using at least one transmission form selected from the group consisting of radio transmissions, microwave transmissions, broadband wireless data transmissions, and satellite transmissions. Ultra-wide band and spread-spectrum transmission are especially promising technologies for the broadcasting of messages and transmission of participants' responses. The multiplexing and frequency shifting inherently available in such technologies improve immunity to noise and interference and the security of data in transmission. For example, suitable techniques which may be used in the implementation of the present system are practiced in connection with cellular telephone systems, including such currently preferred methods as frequency division multiple access (FDMA), time division multiple access (TDMA), code division multiple access (CDMA), and global system for mobile communications (GSM) protocols, as well as other protocols including those defined by the International Telecommunications Union. Especially preferred are implementations of the present method compliant with interoperability standards promulgated by the Open Mobile Alliance and made available at the website www.openmobile.com and by the WAP Forum at the website www.wapforum.com. It is also preferred that access to the interactive features of the present invention be provided to customers of more than one provider of wireless services, including providers of cellular telephone service or of wireless access for PDAs and Pocket PCs. In some embodiments, such access for participants employing wireless interactive devices served by a plurality of providers is provided by a wireless communications system wherein network connection of plural providers permits needed exchange of information, e.g. via the Internet. In other embodiments, the wireless communication system comprises one or more authorized providers of wireless service. Participants employing wireless interactive devices served by another wireless service provider are furnished an access code, such as a telephone number and optionally further codes, or the like, permitting them to connect to one of said authorized providers, whereby they are enabled to participate in the present method, being afforded access to the various features described herein.

Another preferred communications protocol is specified by the several levels of IEEE Standard No. 802.11, published by the Institute of Electrical and Electronics Engineers, and which are incorporated herein in the entirety by reference thereto. Standards in the IEEE 802.11 class (which are also known commonly as "Wi-Fi") specify a local area network system for wirelessly connecting individual devices such as PDA's and Pocket PC's to a local server through which the devices may communicate wirelessly, e.g. through a local intranet or the global Internet. Other wireless protocols that may be used to establish connectivity are also known, such as the Bluetooth Standard, published by the Bluetooth SIG and available through the website www.bluetooth.com, and incorporated herein in the entirety by reference thereto.

It will be understood by one skilled in the relevant art that different transmission modes and frequencies may be used by the wireless communications system for the transmissions to and from the wireless interactive device and that multiple transmission modes and frequencies may be used to accommodate interactive devices of different types simultaneously operated in the present system.

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In one aspect, the present method includes the step of providing a wireless communication system adapted to transmit and receive messages with the wireless interactive devices used by the participants. The wireless system is used to disseminate promotional messages to the participants through the user output interface of the wireless device.

The wireless device employed in the present method preferably presents promotional messages or advertising from sponsors and/or advertisers. Monetary compensation for the presentation of such advertising material is optionally used to defray or underwrite the costs associated with practice of the present invention. Messages can be in the form of indicia 30 located (e.g., physically imprinted) on devices loaned, rented, sold, or otherwise provided to participants. FIG. 1. Additionally, the messages can be visually displayed by the device or can be aurally communicated through the same. The messages can be in the form of preprogrammed or stored aural or visual messages or recordings that are played, e.g. when the device is powered up or down, or at regular or random intervals during usage of the device. Preferably, messages are transmitted by the wireless communication system and presented live during the entertainment event via open band lines. Visual advertising may be presented in discrete segments interspersed with program content or it may be incorporated substantially continuously into the overall image being presented at a given time, such as a banner ad.

In still another aspect of the present method, demographic information or characteristics of the users of wireless interactive devices are gathered and used in various ways. Users may be asked to enter information, such as their age or gender. Alternatively, such information may already be extant and available in databases, such as records of cellular telephone customers. Such information may be used to select which of a plurality of advertisements or queries are most appropriate and likely to be of interest to a given user. The individual addressability of devices such as cellular telephones and wireless PDA's permits individually selected commercials to be presented to particular individuals or groups. Demographic information may also be used to tailor questions and limit contest participation to selected users. For example, in some embodiments participation in all or part of a survey or competition may be offered only to a demographically restricted group. At a casino or other entertainment venue within which entry to certain areas and participation in certain events, e.g. gambling and consumption of alcoholic beverages, is restricted by age, promotional messages may be limited accordingly. In addition, customer survey information is considered more useful by advertisers if the answers are categorized by the demographics of the respondents. All of these functions are easily implemented in the practice of the present method.

In an aspect of the invention, interactive participation using the present method and system is limited to participants who have been enrolled. Such enrollment may be effected by any suitable process carried out either before or during the entertainment event or activity. Optionally, enrollment requires monetary consideration from the person becoming an enrolled participant. Preferably, a participant enrolls by entering suitable information using the wireless interactive device. In some implementations, prospective participants may enroll by a method including a request for enrollment transmitted by telephone, e-mail, interactive registration through an Internet site, regular postal mail, in person at a kiosk or a dedicated terminal provided at the venue. Optionally, the patron is provided with an activation code to be entered using the user input interface of the

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wireless device. Alternatively, persons having a suitable wireless device with localization circuitry may be identified as being present in the venue and thereafter enrolled automatically or be prompted to accept enrollment, e.g. by exchange of text messages. In other embodiments, participation is limited to persons who have enrolled and who are also identified by wireless device localization circuitry as being physically present at the event venue. Optionally, the participant status is terminated when the individual is no longer present in the venue, but may be restored automatically upon return to the venue. The enrollment may also be for a predetermined time period and expire thereafter. The dissemination of information, such as promotional messages and queries for the interactive contests afforded by the present method, may be limited to participants actually present at the venue.

In yet a further aspect, the present method may be used to conduct contests, games, and opinion polls of many types. Generally stated, such activities comprise the steps of: posing one or more questions to participants; prompting the participants to enter an answer to the question using their wireless interactive devices; and processing the results. The questions may be posed using any communication form by which they can be effectively conveyed to participants. Preferably the questions are in a form that may be answered by selection of one of a relatively limited number of alternatives, such as a multiple-choice question or a rating scale. Answers may be entered using the user input interface. Preferably, the results are reported to at least the participants, but they may also be furnished to sponsors, advertisers, or other interested parties.

Contests, games, and polls may include many different types of questions. Concertgoers might be asked to select a favorite song or artist from a number of choices presented or to choose songs to be performed during the concert. Civic events and political rallies might evoke questions about preferences of candidates for public office, opinions about civic issues, legislation, and public policies of many sorts. Participants may also be asked various market research questions, such as their rating of goods or services, e.g. for quality, popularity, ease of use, or other desired characteristics. Other types of questions of more general nature and interest may also be used. Answers preferably are accepted during a limited, preselected time interval.

Preferably, participants in the contests, games, or polls, or respondents to other queries conducted in accordance with the invention, are awarded prizes or other forms of consideration as inducement to participate. For example, one or more participants who correctly answer contest questions or participate in games or opinion polls may be awarded a cash prize or credit. These considerations may be utilized to enhance the enjoyment of participants, to encourage further participation in the querying and contest aspects of the present method, and to promote the sale of goods and services. Such prizes include goods and services of any form or discounts toward the purchase thereof. One preferred form for the delivery of such a credit is an electronic coupon that can be redeemed for any form of consideration, including merchandise, services, and/or other prizes available at the venue. Alternatively, coupons redeemable for items or services at no cost or at a reduced cost may be delivered. For example, a message may be transmitted to a user's wireless device bearing a unique authentication code that could be verified by a vendor, such as through a cash register electronically linked to the central processor or order processing server, or by a telephone call to a preselected verification number. In other implementations, a graphic image such as

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a bar code or other like pattern indicative of the coupon is delivered for display on the user's wireless device and read by a suitable reader at a cash register. In still another alternative, a printed coupon can be physically delivered to the participant based on the location of the user's interactive device by means of communication with the transceiver located therein or by other indication means, or delivered to a remote location by actual physical delivery by mail or the like, or by any form of electronic delivery. Either points or direct monetary credits could also be entered electronically into an account associated with a user, such as a user's credit or debit card, an account for the user's wireless device or Internet service provider, or by other like means known in ordinary commerce. For example, a user collecting sufficient points may redeem them for goods, services, or money. In a preferred embodiment, credits or coupons are transmitted to the winning participant in conjunction with billings for such an account of the participant.

Implementations of the present method and system particularly suited for shopping malls and related types of venue preferably include dissemination of promotional messages soliciting participants to patronize businesses within the venue. Preferably, the promotional messages also convey coupons or other discount offers.

Certain businesses such as restaurants, hairdressers, spas, physical exercise facilities, and the like, are commonly located in shopping malls. These businesses offer particular and specific services to individuals or small, predefined groups of acquainted persons, either at appointed times or when service (i.e. specific equipment or service persons) becomes available. Practice of the present method is especially beneficial for these enterprises. In an aspect of the present method, promotional messages from these businesses solicit enrolled persons to make a reservation for a desired future service and request notification to be made thereafter through the wireless interactive device, such as by receipt of a cellular telephone call or text message, of the availability of the service. For example, a restaurant might notify a patron that a table has become available; a gymnasium might notify a patron that desired exercise machines or a personal trainer was available. The service may also comprise a defined service task, such as repair of shoes or other wearing apparel, an appliance, or a motor vehicle, with the notification of the patron indicating completion of the service task and the availability of the item for pick-up. In these and related situations, customers are afforded a more pleasant shopping experience and a more productive use of time enjoying other activities or accomplishing other needful tasks instead of non-productively waiting in lines.

In a further embodiment, the solicitation and querying for services is optionally used also for ordering. For example, a restaurant might solicit business by providing its food and beverage menu by transmission to the participant's wireless interactive device. A hierarchical arrangement of a known sort including submenus may be used in situations wherein more items are available than can be accommodated within the confines of output displays of extant interactive devices. An interested user could then select desired items by navigating using the input interface through the menus to select and order one or more items for purchase, either to be consumed at the restaurant or prepared for take-out. The user is notified when the order is ready or a table is available using his/her wireless interactive device. As hierarchical menu systems have become ubiquitous with the advent of automated teller machines and windowed graphical user interfaces on modern personal computer operating systems,

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the concept and the method of their use are familiar to many persons and will not be further described here.

Preferably, monetary consideration for purchased items is provided by electronic transfer of funds between bank accounts or by charges billed to a user, such as to a user's conventional debit or credit card or wireless service provider account. Consummation of transactions using other forms of payment known for electronic processing may also be used and are to be considered within the scope of the method of the invention. In one embodiment, the present system is connected to an electronic financial network of a type known in the art. Transfer of funds from the network provides monetary consideration to the provider for the goods and services received by the ordering participant.

Alternatively, any mechanism for effecting electronic payment known in the relevant art is used. As is well understood by those skilled in the art, even the limited hardware display and processing capacity of present cellular telephones, PDA's, and pagers is sufficient to accommodate the aforementioned menu and ordering method. However, as time moves on, much higher text densities and graphics resolution will likely become commonplace in such devices and allow ever-increasing functionality to be provided and used in the method of this invention.

In addition, other services are optionally offered, such as restaurant, lodging and transportation reservations, biographical and recording data for athletes, concert artists, and other performers, future schedules of events, and myriad other information. This information can be conveyed visually, audibly, or via a combination of both media forms. The offerings presented through the wireless interactive device may be complemented by messages simultaneously displayed on video displays, monitors, or the like to enhance their ability to garner the participants' attention.

In an implementation, the present method also comprises querying the participants to respond with answers entered through the user input interface of the wireless device and transmitted therefrom using the wireless communication system. The answers received are transferred to a central processor for processing into results. It will be recognized that the accumulation of results may be done in the central processor or in one or more distributed receiving servers networked in data communication with the central processor by techniques well known in the computer art, such as by use of a local area network communicating over wire, wireless, or fiber optic communication links. Preferably, a stored computer program operative in either form of server accumulates and stores the incoming answers, at least temporarily, as participant data. The results of processing the participant data are also preferably stored, at least temporarily. At a suitable time, such as after the expiration of an announced deadline for participants to enter and transmit their responses to queries, the processed results are then announced to the participants. Optionally prizes are awarded to participants who have entered an answer.

It will be understood that all of the aforementioned computing functions can be carried out by one or more general-purpose computer processors located either within the event venue or its environs, or at a remote location linked by any suitable data communications link using cable, fiber-optic, wireless, or other comparable transmission. The computing functions may be carried out by a single central processor, by linked distributed processors, or a combination thereof.

Queries can be promulgated to the participants in many ways, including notice given by public address system announcements, visual displays such as video monitors of

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any size, or the like visible to the participants, or by messages such as aural, textual, or graphic messages transmitted to the interactive units and then output to the participant using the user output interface. In some implementations questions may be printed in event programs, flyers, newspapers, or the like. Optionally the queries are included in content provided by Internet portal sites to which participants may connect. Questions may also be included in audio or video announcements, or in other program content broadcast to the interactive units. Preferably, the questions are promulgated using at least one display visible to the participants. More preferably, the visible display comprises large-scale displays and/or monitors provided in the venue. After assimilation and processing of participant responses, announcement of results may be given to the participants by similar means, or by another form of public dissemination, such as an Internet posting.

In one embodiment, a display visible to a sizable number of participants, such as large screen display **40**, as depicted in FIG. **2**, is used both for promulgating queries to participants and for announcing results. Any one or more large display devices capable of displaying a video, graphic, or alphanumeric image to a large number of participants may be used, a JUMBOTRON® display being one suitable and preferred type. Alternatively, the display visible to the participants comprises plural video monitors such as CRT displays, plasma screens, or the like, preferably dispersed throughout the venue.

The questions and results are optionally displayed on these monitors. A user input interface, such as keypad **50** on device **10**, allows an enrolled participant to enter a response to queries. Examples of simple user input interfaces include a keypad, selection buttons, a touch screen, a rotatable dial, a pointing device such as a mouse or trackball, and a voice recognition system, but any other user interface by which the required input can be effected could be incorporated in the practice of the invention. A voice recognition system advantageously facilitates the use of the present system by visually impaired persons. Many easy to use interfaces are known to one of ordinary skill in the art, and the invention is not limited to any particular user interface.

In FIG. **2** there is depicted the practice of an embodiment of the invention. At least some of the spectators at an athletic event occurring in a large, outdoor stadium employ an interactive device **10** and **10'**. Although FIG. **2** depicts the practice of the present method in a football stadium, it will be understood that the present invention may also be practiced at venues of other types. It will be understood that the interactive device may be an item provided by the participant such as a cellular phone, or a wireless PDA or Pocket PC. Alternatively, suitable general- or special-purpose devices are made available at the spectator venue for purchase or rent or are given away without charge. In still other embodiments, the present system is operative both with user-provided devices and devices made available at the venue. The present inventor contemplates that only a portion of the persons present in a venue may choose to participate, either by using a suitable general-purpose interactive device they furnish or by obtaining a specialized unit at the venue. FIG. **2** further depicts the users entering answers to a query using keypads available on their respective interactive devices and the display of answers on a large display board **40**. In addition to displaying results of the audience querying or contest, the material displayed on board **40** or dispersed video monitors optionally also includes promotional messages or advertising. For example, a given contest question might be sponsored by a business entity in return for

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including advertising for the entity's products or services during the querying and announcing associated with that contest.

Optionally, the responses of the participants are sent to a central processor (not shown) having a computer program stored and operative therein that is adapted to tabulate the responses. Then, the processed information is stored and displayed to the audience member, either on the device **10** or a remotely located large screen display **40**. FIGS. **1** and **2**. The processed information could be a compilation or tabulation of similar responses, as either a number or a percentage of total responses, a graphical representation in a bar chart, pie chart or the like, or a combined graphical and numerical representation of the data. The processing further may include categorization of participants' responses according to demographic characteristics, which might include the age or gender of the participant.

In addition to prizes that can be won by participating in the contests and polls described above, a number of other incentives are optionally offered to attendees to induce them to participate in the interactive aspects of the present invention. In one aspect, access to a chat room and instant messaging are provided to some or all the enrolled participants. Participants may be enrolled by any suitable process, as delineated hereinabove. Messages may be exchanged interactively among the participants using any suitable protocol, such as cellular telephone text messaging and known systems used for instant messaging between Internet enabled personal computers and Internet-enabled wireless telephones, PCs, and PDAs. Optionally, enrolled participants are offered the chance to receive one or more newsworthy instant messages from a message sponsor. In some embodiments, the chat room and instant message features are provided at no cost, while in others, a fee might be charged by the offering entity for the services.

Yet another aspect of the invention allows participants to interactively participate in auctions, which may be of any type commonly known, including conventional auctions wherein items are sold to the lowest bidder; Dutch auctions, in which one or more items are offered at a fixed price to the first bidder or preselected maximum number of bidders; a reverse auction, in which the price of an item is lowered in response to a large number of bids received; and other forms. The goods or services offered in such auctions may include any goods or services of interest to the participants. The auctions are conducted by disseminating a description of the goods or services offered to the participants through one or more of the modes discussed hereinabove for the dissemination of the contest queries of the invention. Participants enter their bids or related responses by using the user input interface of their wireless interactive devices. Such auctions conducted within a venue in accordance with the invention beneficially evoke a high level of interest due to the level of enthusiasm and excitement typically evident in such an environment.

Preferably, the opportunity to participate in the various interactive features of the present method and system, along with eligibility for the various prizes and other incentives, are offered to substantially all the persons at the venue. However, participation in some or all features may be limited to some subset of the persons physically present at the event.

FIG. **3** depicts one implementation of the system **100** of the invention. A wireless communications system **105** provides service to cellular telephones, wireless PDA's, and Pocket PC's. Wireless interactive devices used with the system are a plurality of cellular telephones **110** and served

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by cellular telephone provider **112** through signals transmitted and received at antenna **114**. Wireless PDA's **116** are served by wireless PDA service provider **118** through signals transmitted and received at antenna **120**. A wireless local area network **122** transmitting signals in accordance with one of the levels of IEEE Standard 802.11 from antenna **124** serves wireless Pocket PC's **126**. Each of cellular telephone provider **112**, wireless PDA service provider **118**, and wireless local area network **122** communicates through the Internet **128**.

Enrollment server **150** is used to receive messages transmitted from interactive devices **110**, **116**, and **126** or otherwise requesting enrollment. Promotional message server **130** selects promotional messages which are transmitted via the Internet to wireless communications system **105**, and broadcast to interactive devices **110**, **116**, and **126**. Promotional messages are also transmitted to a large video display **132**, which includes a controller operative to receive digital information, e.g. information received via the Internet, and convert it into corresponding textual, graphic, or video displays for presentation. Central processor **134** provides queries displayed on display **132**. Answers to such queries are entered on the user input interfaces of interactive devices **110**, **116**, and **126** and received by distributed receiving servers (not shown) maintained by each of cellular telephone provider **112**, wireless PDA service provider **118**, and wireless local area network **122**. The distributed receiving servers accumulate the answers and transfer them by Internet to central processor **134** for processing into results, which are then communicated and displayed by display **132**. Order processing server **136** receives orders for goods and services entered by participants using their wireless interactive devices and communicates those orders to one or more providers **138** of goods and services, such as food/beverage vendors. Connection **140** to electronic financial network **142** enables the electronic transmission to providers **138** of monetary consideration for the goods and services they furnish. Enrollment server **140** acts in concert with central processor **134** and promotional message server **130** in the selection of promotional messages and queries and the enrolled participants to whom such communications are sent.

It will be understood by those skilled in the relevant art that the functions of the plural servers alternatively may be shared among a smaller number of servers or may be accomplished by central processor **134**. The plural servers also may be in data communications via the Internet or a local network implemented using connections by wire, wireless, or optical data transmission, in any way conventional in the art. Other networking protocols suitable for the interchange of digital information may also be used.

Having thus described the invention in rather full detail, it will be understood that such detail need not be strictly adhered to, but that additional changes and modifications may suggest themselves to one skilled in the art, all falling within the scope of the invention as defined by the subjoined claims.

What is claimed is:

1. A method for enabling interactive participation by enrolled participants during shopping activity occurring at a shopping venue patronized by a plurality of persons, said enrolled participants employing a wireless interactive device having a unique signature associated therewith and capability to: (i) receive and transmit messages; (ii) accept input via a user input interface; (iii) output messages to a user output interface; and (iv) transmit said unique signature, the method comprising the steps of:

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enrolling at least some of said persons as enrolled participants, each being equipped with one of said wireless interactive devices;

providing a wireless communication system for transmitting and receiving messages with said interactive device;

querying said enrolled participants to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device; and

receiving answers entered by said enrolled participants, said wireless interactive device further comprising localization circuitry for transmitting a location signal indicative of a physical location of said device, said method further comprising the step of detecting said transmitted location signal and said querying being directed only to enrolled participants for whom said transmitted location signal is indicative of a physical location within said shopping venue.

2. A method as recited by claim 1, further comprising the step of disseminating at least one promotional message to said enrolled participants.

3. A method as recited by claim 2, wherein said promotional message is displayed on said user output interface.

4. A method as recited by claim 2, wherein said promotional message is disseminated for monetary consideration from an advertiser.

5. A method as recited by claim 2, wherein said promotional messages include: (i) a solicitation for enrolled persons to make a reservation for provision at a future time of a desired service; and (ii) a notification thereafter of the availability of said desired service.

6. A method as recited by claim 5, wherein said solicitation prompts said enrolled person to select and order items comprised in said desired service.

7. A method as recited by claim 1, wherein said enrolling step is effected automatically for persons patronizing said shopping venue and possessing a said wireless interactive device, upon detection of said transmitted location signal indicative of a physical location within said shopping venue.

8. A method as recited by claim 1, wherein said enrolling comprises receipt of a request transmitted by one or more of said persons requesting enrollment as participants.

9. A method as recited by claim 8, wherein said transmitting of said request is carried out using at least one of telephone, e-mail, interactive registration through an Internet site, and regular postal mail.

10. A method as recited by claim 1, further comprising the step of providing at least one kiosk or terminal at said shopping venue, said kiosk or terminal accepting requests for enrollment of said persons as said enrolled participants.

11. A method as recited by claim 8, wherein said enrolling comprises receipt of a text message transmitted from said wireless interactive device.

12. A method as recited by claim 1, wherein said enrolling further comprises receipt of an activation code entered using said user input interface of said wireless interactive device.

13. A method as recited by claim 1, wherein said enrolling is terminated upon the departure of said participant from said shopping venue.

14. A method as recited by claim 1, wherein said enrolling expires after a predetermined time period.

15. A method as recited by claim 1, wherein said unique signature comprises indicia entered into said wireless interactive devices using the user input interface thereof.

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16. A method as recited by claim 1, further comprising collecting demographic characteristics of at least a portion of said enrolled participants.

17. A method as recited by claim 16, wherein said query is selected based on said demographic characteristics of said enrolled participant.

18. A method as recited by claim 16, further comprising the step of disseminating at least one promotional message to said enrolled participants, said promotional message being selected based on said demographic characteristics of said enrolled participant.

19. A method as recited by claim 1, further comprising the step of offering at least one incentive to induce said persons to become said enrolled participants during said shopping activity.

20. A method as recited by claim 19, wherein said incentive comprises conveying to said participant at least one of goods, services, or coupons redeemable for at least part of the price of goods or services.

21. A method as recited by claim 19, wherein said incentive comprises electronic transfer of consideration to said enrolled participant.

22. A method as recited by claim 1, further comprising the step of relaying informational items, said items being transmitted by said wireless communication system to said wireless interactive device for output using said user output interface.

23. A method as recited by claim 22, wherein said informational items comprise items selected from the group consisting of news reports, traffic condition reports, weather conditions, weather forecasts, sports news and scores,

24. A method as recited by claim 1, wherein said querying comprises a contest.

25. A method as recited by claim 1, wherein said querying comprises a game.

26. A method as recited by claim 1, wherein said querying comprises an opinion poll.

27. A method as recited by claim 1, wherein said querying is limited to a portion of said enrolled participants.

28. A method as recited by claim 1, wherein said querying step is accomplished by at least one display visible to said participants.

29. A method as recited by claim 28, wherein said display comprises a large-scale video display.

30. A method as recited by claim 1, wherein said querying step is accomplished by a notice audible to said enrolled participants.

31. A method as recited by claim 1, further comprising the step of awarding a prize to at least one of said participants who has entered an answer in response to said querying.

32. A method as recited by claim 31, wherein said prize is delivered to said enrolled participant.

33. A method as recited by claim 31, wherein said prize is transferred electronically to said enrolled participant.

34. A method as recited by claim 1, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

35. A method as recited by claim 1, wherein said interactive device is a member selected from the group consisting of cellular telephones, two-way pagers, wireless personal digital assistants, and wireless pocket PC's.

36. A method as recited by claim 1, wherein said wireless interactive device is Internet-enabled and at least a portion

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of the communications to and from said wireless interactive device is accomplished using the Internet.

37. A method as recited by claim 1, wherein said user output interface comprises at least one of an alphanumeric text display, a graphical display, and an audio output means.

38. A method as recited by claim 1, wherein said shopping activity comprises at least one event having programmatic content with an identifiable duration.

39. A system for enabling interactive participation by enrolled participants during shopping activity occurring at a shopping venue patronized by a plurality of persons, each of the participants employing a wireless interactive device having a unique signature associated therewith and capability to: (i) receive and transmit messages; (ii) accept input via a user input interface; (iii) output messages to a user output interface; and (iv) transmit said unique signature, the system comprising:

means for enrolling at least some of said persons as enrolled participants, each being equipped with one of said wireless interactive devices;

a wireless communication means for transmitting and receiving messages with said interactive device;

means for querying said enrolled participants to respond to at least one query with an answer entered through said user input interface and transmitted by said interactive device;

means for receiving answers entered by said enrolled participants, and

means for disseminating at least one promotional message to said enrolled participants through said user output interface of said interactive device

said disseminating means comprising a promotional message server in data communication with said wireless communications system, said promotional message server providing said at least one promotional message from a plurality of messages stored in said promotional message server and sending said promotional message to said wireless interactive device through said wireless communications system.

40. A system as recited by claim 39, wherein said wireless communications means comprises at least one wireless system operated by a wireless service provider.

41. A system as recited by claim 39, wherein said query is displayed on said user output interface.

42. A system as recited by claim 39, wherein said querying means comprises at least one display visible to said enrolled participants and said query is displayed thereon.

43. A system as recited by claim 42, wherein said visible display comprises a plurality of video monitors dispersed throughout said venue.

44. A system as recited by claim 42, wherein said visible display comprises a large screen display visible to the enrolled participants in said venue.

45. A system as recited by claim 39, wherein said promotional message server employs demographic characteristics of said enrolled participant in selecting said promotional message for said enrolled participant.

46. A system as recited by claim 39, further comprising at least one prize appointed to be awarded to at least one of said enrolled participants.

47. A system as recited by claim 39, wherein said wireless interactive device is a member selected from the group consisting of cellular telephones, wireless personal digital assistants, wireless pocket PC's, and two-way pagers, said member being provided wireless access by said wireless service provider.

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48. A system as recited by claim 39, wherein said wireless interactive device is Internet enabled and communicates therewith.

49. A system as recited by claim 39, wherein said wireless interactive device incorporates circuitry for receiving broadcast informational items and said system further comprises a broadcasting system broadcasting said informational items appointed to be received by said wireless interactive device.

50. A system as recited by claim 39, wherein said wireless communications system transmits and receives using at least one transmission form selected from the group consisting of radio transmission, microwave transmission, broadband wireless data transmission, ultra-wide band transmission, spread-spectrum transmission, and satellite transmission.

51. A system as recited by claim 39, wherein said querying means comprises a querying server in data communication with said wireless communications system, said querying server providing said at least one query from a plurality of queries stored in said querying server and sending said query to said enrolled participant's said wire-

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less interactive device through said wireless communications system, said querying server employing demographic characteristics of said enrolled participant in selecting said query.

52. A system as recited by claim 39, wherein said wireless interactive device further comprises localization circuitry and transmits its position obtained from said localization circuitry.

53. A system as recited by claim 39, wherein said enrolling means comprises an enrollment server in data communication with said wireless communications system and said querying means, said enrollment server receiving and consummating requests for enrollment as enrolled participants transmitted by one or more of said persons and communicating said enrollments to said querying means.

54. As system as recited by claim 53, said enrolling means further comprising at least one kiosk or terminal in said shopping venue for receiving said requests for enrollment.

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